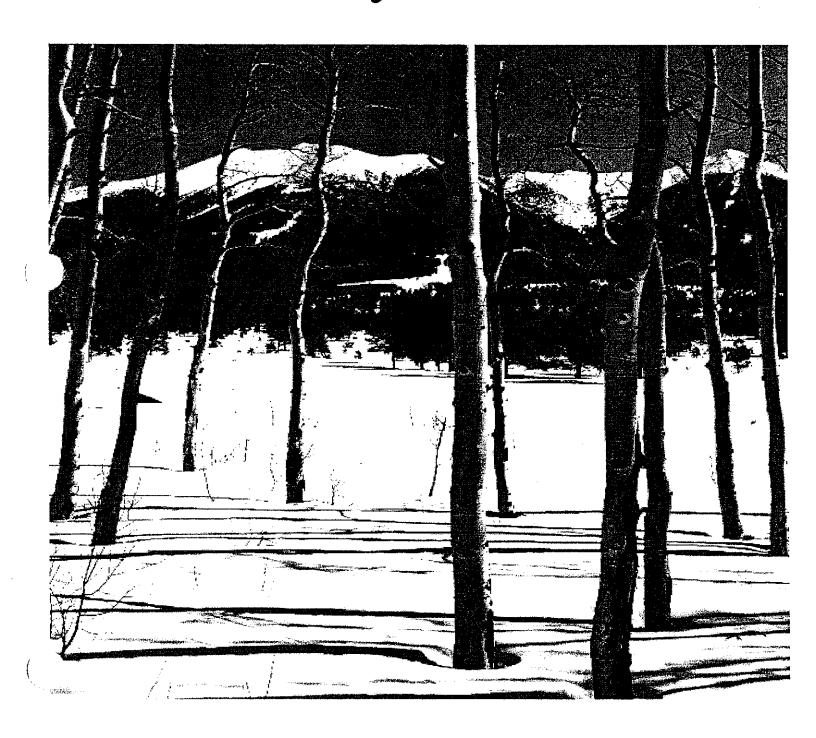


Natural Resources Conservation Service

# USDA United States Department of Agriculture USDA United States United States United States United States United States Basin Outlook Report January 1, 2000



# **Basin Outlook Reports**

# and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Vane O. Campbell, Area Conservationist, 340 N. 600 E., Richfield, UT 84701 - Phone: (435) 896-6441
Todd C. Nielson, Area Conservationist, 302 E. 1860 S., Provo, UT 84606 - Phone: (801) 377-5580
David M. Webster, Area Conservationist, 240 W. HWY 40, 333-4, Roosevelt, UT 84006 - Phone: (435)722-4261

#### How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the da The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origender, religion, age, disability, political beliefs, sexual orientation and marital or family status. (Not all prohibited bases apply to all programs.)

Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326 W, Whitten Building, 14th and Independence Ave., SW, Washington, D.C., 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

#### STATE OF UTAH GENERAL OUTLOOK Jan 1, 2000

#### **SUMMARY**

For the third consecutive year, Utah snowpacks have started the year off in the cellar, with this year distinguishing itself as, by far, the worst of the three. In general, snowpacks range from pathetic to abysmal and in specific, from 20% in southern Utah, to 45% in northern Utah. Statewide, weather conditions must average at least 140% of normal over the next three months in order to reach average snowpack conditions by April. The probability of getting 140% of average snowpack accumulation from January through March is just 8%, or in other words, we expect a below normal snowpack season. The good news is that there is a high probability (80%-90%)) that snowpacks will increase from where they are now. The average statewide increase in snowpack in years that start our very dry is about 30%, which would put the April 1 snowpack in the 50% to 75% range, much better than where we are today, but far less than where we would like to be. Getting even higher snowpack accumulations between now and April is certainly possible although not nearly as probable. Specific climatic conditions over the next three months will determine how the runoff season of 2000 ends up. Precipitation during the fall of 1999 (Oct-Dec) was merely a drop in the bucket as well, ranging from 21% to 45% of average. This unusually dry fall has severely depleted soil moisture, which, in turn, could adversely affect spring snowmelt runoff. A much higher than normal amount of snowmelt could be infiltrated to the soil, leaving less for streamflow. Reservoir storage is generally in excellent condition at 81% of capacity. Most operators are following a conservative strategy in anticipation of a marginal runoff year. Streamflow forecasts call for below to much below normal April-July runoff statewide.

#### **SNOWPACK**

January first snowpacks in Utah, as measured by the NRCS SNOTEL system, are much below average statewide. In northern Utah, snowpacks range from 43% of normal over the Uintahs to 47% of average on the Bear River Basin. There is only a 5% to 15% chance of receiving enough snow over the next three months to reach average conditions by April. In southern Utah, snowpacks range from 20% to 40% of normal. Lower elevation snowpacks have proportionately less snow due to warmer than normal temperatures. This condition may persist throughout the snow accumulation and melt season, as was the case last year.

#### **PRECIPITATION**

Mountain precipitation in the fall of 1999 was much below average across the entire state of Utah, ranging from 21% to 45% of normal. Precipitation in December was the largest of the three months at 66% of average. This brings the seasonal accumulation (Oct-Dec)

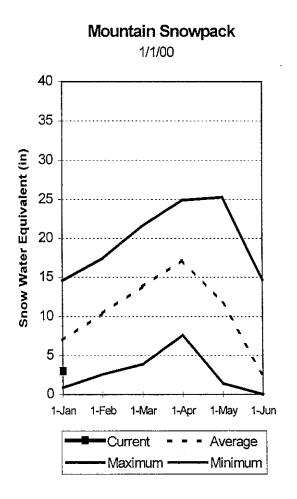
up to 39% of average statewide. The seasonal accumulation was just 24% of normal last month.

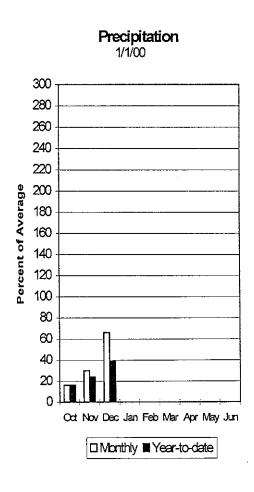
#### RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 81% of capacity. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible in anticipation of a poor runoff season. Both Minersville and Otter Creek Reservoirs, which have undergone recent repairs, are currently storing water.

#### STREAMFLOW

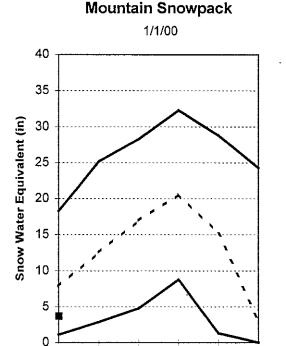
Snowmelt streamflows are expected to be below to much below average across the entire state of Utah this year. Streamflows will most likely have lower peaks and low volumes this runoff season. There are still three snowpack accumulation months ahead and any streamflow outcome is still possible, including above average flows. However, the greatest probability at this point, given the very low snowpacks we have, is for a relatively poor runoff season. Those on direct streamflow should prepare for a very poor season.





#### Bear River Basin Jan 1, 2000

Snowpacks on the Bear River Basin are much below average at 47% of normal, about 65% of last year. Specific sites range from 28% to 66% of normal. This is the lowest Jan 1 snowpack since 1977 and there is only a 10% chance of getting back to average or above by April. Fall weather was extremely dry depleting soil moisture which may have an adverse affect on spring runoff. December precipitation was much below normal at 60%, which brings the seasonal accumulation (Oct-Dec) to a meager 39% of average. Reservoir storage is at 77% capacity. In general, spring runoff conditions are much below average.



1-Feb

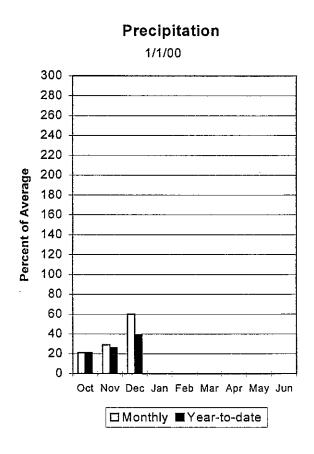
1-Mar

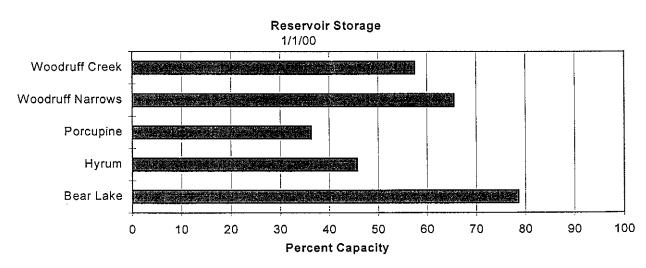
Average

Minimum

Current

Maximum





#### BEAR RIVER BASIN

Streamflow Forecasts - January 1, 2000

		<<=====	Drier ====	== Future C	onditions =	====== Wetter	====>>			
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)		
Bear R nr UT-WY State Line	APR-JUL	52	65	75	65	87	108	115		
BEAR R nr Woodruff, UT	APR-JUL	45	68	90	60	119	179	149		
BIG CK nr Randolph	APR-JUL	0.08	0.63	2.20	58	3.77	6.09	3.80		
BEAR R nr Randolph, UT	APR-JUL	0.0	48	80	68	112	160	118		
SMITHS FK nr Border, WY	APR-JUL	38	53	66	65	82	113	102		
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	8.3	13.2	18.0	55	25	39	33		
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	35	103	150	52	197	265	288		
MONTPELIER CK nr Montpelier (Disc)(2	APR-JUL	3.6	5.1	6.5	53	8.2	11.7	12.2		
CUB R nr Preston	APR-JUL	10.0	21	28	60	35	46	47		
L BEAR R at Paradise, UT	APR-JUL	12.0	17.2	22	49	28	40	45		
LOGAN R nr Logan	APR-JUL	31	43	53	50	65	89	107		
BLACKSMITH Fk nr Hyrum	APR-JUL	16.5	22	27	50	33	44	54		

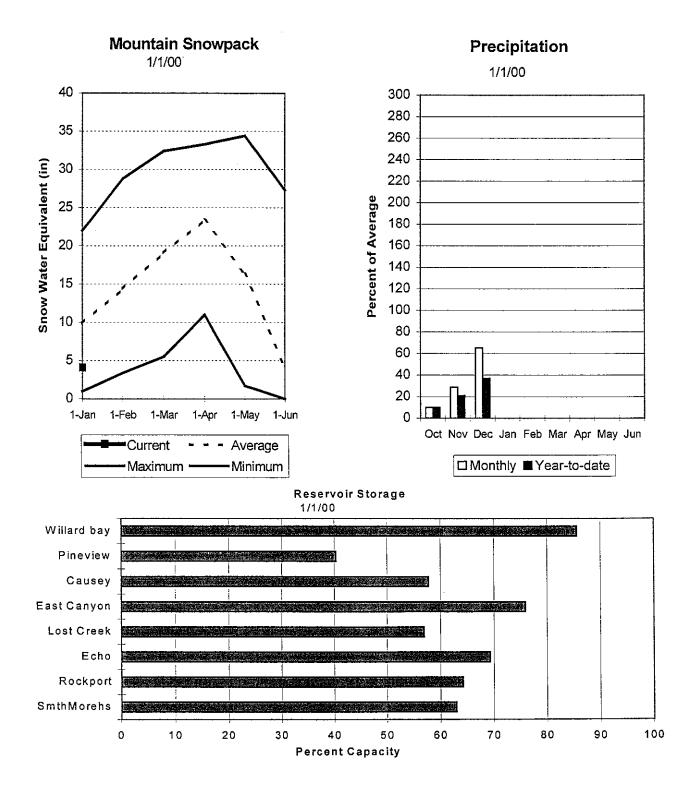
BEA Reservoir Storage	R RIVER BASIN (1000 AF) - End	BEAR Watershed Snowpad	RIVER BASIN ck Analysis -	January 1	, 2000			
Reservoir	Usable Capacity		able Stora Last Year	ge *** Avg	Watershed	Number of Data Sites	This Yea	r as % of Average
BEAR LAKE HYRUM PORCUPINE WOODRUFF NARROWS WOODRUFF CREEK	1421.0 15.3 11.3 57.3 4.0	1154.5 7.0 4.1 37.5 2.3	1139.9 11.0 0.0 43.0 3.8	982.0 10.0 2.8	BEAR RIVER, UPPER (abv BEAR RIVER, LOWER (blu LOGAN RIVER RAFT RIVER BEAR RIVER BASIN		70 62 59 61 65	49 46 42 66 47

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.(2) - The value is natural flow - actual flow may be affected by upstream water management.

#### Weber and Ogden River Basins Jan 1, 2000

Snowpack on the Weber and Ogden Watersheds is at 41% of average, just 78% of last year. Individual sites range from 21% to near 64% of average. This is the lowest Jan 1 snowpack since 1977 and there is only a 5% chance of average or above by April. Fall weather was extremely dry depleting soil moisture which could have and adverse impact on spring runoff. Precipitation during Dec was below normal at 65% of average, bringing the seasonal accumulation (Oct-Dec) to a meager 37% of average. Reservoir storage on the Weber system is at 69% of capacity. Spring runoff conditions are much below average.



#### WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - January 1, 2000

		   <<=====	Drier ====	== Future Co	onditions =	====== Wetter	=====>>	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	- Chance Of E 50% (Most (1000AF)		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	4.2	12.4	18.0	60	24	32	30
WEBER R nr Oakley	APR-JUL	42	63	78	64	93	114	122
ROCKPORT RESERVOIR inflow	APR-JUL	29	59	79	59	99	129	134
CHALK CK at Coalville, Ut	APR - JUL	0.9	15.0	26	59	37	53	44
WEBER R nr Coalville, Ut	APR - JUL	28	59	80	59	101	132	136
ECHO RESERVOIR Inflow	APR - JUL	30	75	105	60	135	180	176
LOST CK Res Inflow	APR-JUL	0.3	3.8	9.0	52	15.2	24	17.2
E CANYON CK nr Morgan	APR-JUL	4.3	12.5	18.0	60	24	32	30
WEBER R at Gateway	APR-JUL	141	182	210	61	238	279	347
S FORK OGDEN R nr Huntsville	APR-JUL	9.2	24	34	54	44	59	63
PINEVIEW RESERVOIR Inflow	APR-JUL	14.0	48	72	58	96	130	124
WHEELER CK nr Huntsville	APR-JUL	0.34	1.98	3.10	50	4.22	5.86	6.20

	OGDEN WATERSHEDS in		ber		WEBER & OGDE Watershed Snowpa			, 2000
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year			Number of Data Sites	This Yea	or as % of Average
CAUSEY EAST CANYON ECHO LOST CREEK PINEVIEW ROCKPORT WILLARD BAY	7.1 49.5 73.9 22.5 110.1 60.9 215.0	4.1 37.6 51.2 12.8 44.4 39.1 184.0	3.3 37.0 61.6 0.9 79.9 42.7 175.0	2.1 33.3 41.4 12.7 50.0 34.1 104.9	OGDEN RIVER WEBER RIVER WEBER & OGDEN WATERSHI	4 9 9 EDS 13	62 85 78	29 48 41

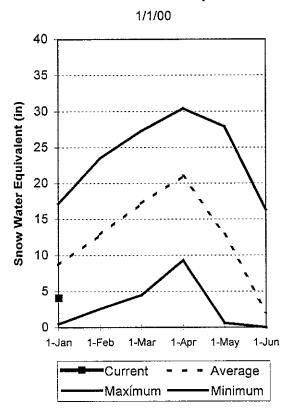
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.(2) - The value is natural flow - actual flow may be affected by upstream water management.

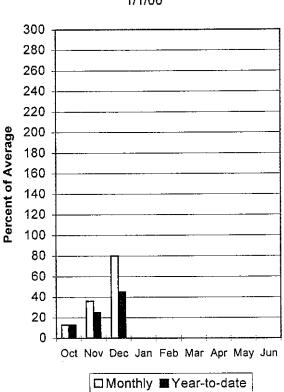
#### Utah Lake, Jordan River & Tooele Valley Basins Jan 1, 2000

Snowpacks over these watersheds are much below average at 47% of normal, about 91% of last year. Individual sites range from 19% to 74% of average. There is only a 15% chance of getting back to average or above by April. Fall weather was extremely dry depleting soil moisture which could have an adverse affect on spring runoff. Precipitation during Dec was below normal at 80%, bringing the seasonal accumulation (Oct-Dec) to 45% of average. Reservoir storage is at 88% of capacity. Spring runoff conditions are much below normal. Water users on direct streamflow should prepare for a marginal runoff season.

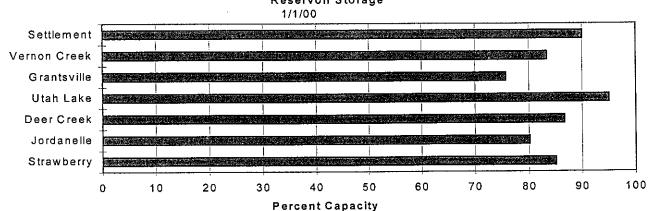
#### Mountain Snowpack



#### Precipitation 1/1/00



#### Reservoir Storage



## UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - January 1, 2000

			Drier ====			===== Wetter		
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
PAYSON CK nr Payson	APR-JUL	1.98	2.42	2.80	64	4.02	6.60	4.40
SPANISH FORK nr Castilla	APR-JUL	7.4	21	45	61	70	111	74
HOBBLE CK nr Springville	APR-JUL	2.3	6.7	10.9	58	15.1	23	18.8
PROVO R nr Hailstone	APR-JUL	25	52	69	63	86	113	109
PROVO R below Deer Creek Dam	APR-JUL	9.0	51	78	61	105	148	128
AMERICAN FORK nr American Fk.	APR-JUL	7.0	9.5	15.9	50	22	33	32
UTAH LAKE inflow	APR-JUL	52	129	205	63	281	405	324
L COTTONWOOD CRK nr SLC	APR-JUL	15.2	23	28	72	33	41	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	14.8	22	27	71	32	39	38
PARLEY'S CK nr SLC	APR-JUL	1.1	4.3	8.0	50	11.7	17.6	15.9
MILL CK nr SLC	APR-JUL	1.43	3.07	4.20	65	5.33	7.22	6.50
DELL FK nr SLC	APR-JUL	0.99	1.88	3.70	52	5.52	8.73	7.10
EMIGRATION CK nr SLC	APR-JUL	0.42	1.05	2.50	60	3.95	6.30	4.20
CITY CK nr SLC	APR-JUL	1.41	3.42	5.20	63	6.98	9.79	8.30
VERNON CK nr Vernon (Acre Feet)	APR-JUL	279	457	640	48	896	1471	1340
SETTLEMENT CK nr Tooele (Acre Feet)	APR-JUL	244	585	1060	46	1920	4596	2300
S WILLOW CK nr Grantsville	APR-JUL	0.06	0.48	1.50	48	2.52	4.02	3.10
UTAH LAKE, JORDAN R	IVER & TOO	ELE VALLEY			UTAH LAKE,	JORDAN RIVER	& TOOELE VA	/LLEY

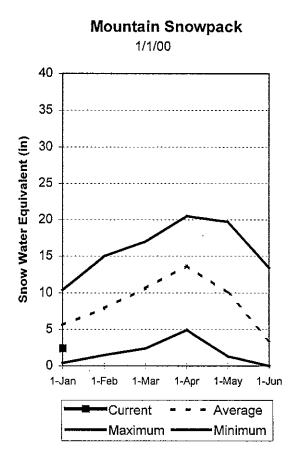
	age (1000 AF) - End				Watershed Snowpac			
Usable *** Usable Storage Reservoir Capacity This Last					Watershed	Number of	======	r as % of
	 	Year	Year	A∨g		Data Sites	Last Yr	Average
DEER CREEK	149.7	129.7	124.1	93.5	PROVO RIVER & UTAH LAKI	7	89	42
GRANTSVILLE	3.3	2.5	2.8		PROVO RIVER	4	76	38
SETTLEMENT CREEK	1.0	0.9	1.0	0.6	JORDAN RIVER & GREAT SA	ALT 6	<del>9</del> 5	52
STRAWBERRY-ENLARGED	1105.9	940.0	1001.0		TOOELE VALLEY WATERSHEE	)S 3	84	44
UTAH LAKE	870.9	827.4	904.7	601.6	UTAH LAKE, JORDAN RIVE	₹& 16	91	47
VERNON CREEK	0.6	0.5	0.5	0.4	<b>'</b>			

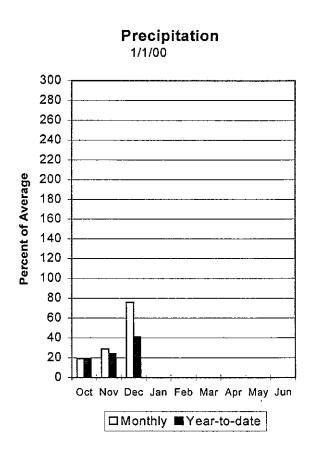
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

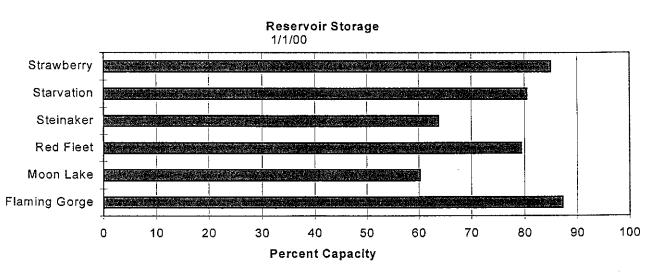
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) - The value is natural flow - actual flow may be affected by upstream water management.

#### Uintah Basin and Dagget SCD's Jan 1, 2000

Snowpacks across the Uintah Basin and North Slope areas are much below average at 43%, just 63% of last year. The North Slope ranges from 22% to 91% and the Uintah Basin ranges from 24% to 63% of average. This is the lowest Jan 1 snowpack since 1977. Extremely dry fall weather has depleted soil moisture which may adversely affect spring runoff. Precipitation during Dec was 76% of normal, bringing the seasonal accumulation (Oct-Dec) to a meager 41% of average. Reservoir storage is excellent at 85% of capacity. Springtime runoff conditions are poor and there is only a 5% chance of reaching an average snowpack by April.







#### UINTAH BASIN & DAGGET SCD'S

Streamflow Forecasts - January 1, 2000

	<b>*****</b> *******************************	**======   <<====== 	Drier ====	== Future Co	enditions ==	====== Wetter	. ====c>> :====c>==	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	Chance Of E 50% (Most (1000AF)		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Blacks Fork nr Robertson	APR-JUL	33	51	64	67	77	95	95
EF of Smiths Fork nr Robertson	APR-JUL	14.4	17.2	19.4	65	22	26	30
Flaming Gorge Reservoir Inflow	APR-JUL	251	553	725	61	897	1423	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	6.4	10.9	14.0	71	17.1	22	19.8
Ashley Creek nr Vernal	APR-JUL	12.7	15.7	25	49	34	48	51
WF DUCHESNE RIVER nr Hanna	APR-JUL	6.0	10.4	14.0	54	18.2	25	26
DUCHESNE R nr Tabiona	APR-JUL	20	33	45	43	57	76	105
UPPER STILLWATER RESV inflow	APR-JUL	25	37	50	62	63	82	81
ROCK CK nr Mountain Home	APR-JUL	32	49	60	64	72	89	94
DUCHESNE R abv Knight Diversion	APR-JUL	35	77	105	56	133	175	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	6.5	17.5	28	48	41	65	59
CURRANT CREEK RESV Inflow	APR-JUL	2.8	8.3	12.0	57	15.7	21	21
STARVATION RESERVOIR inflow	APR-JUL	37	46	60	51	89	131	117
MOON LAKE Inflow	APR-JUL	19.3	28	37	54	46	59	69
Yellowstone River nr Altonah	APR-JUL	14.9	22	32	49	43	58	65
DUCHESNE R at Myton	APR-JUL	32	48	65	25	117	193	263
UINTA R nr Neola	APR-JUL	27	33	46	54	64	90	85
Whiterocks River nr Whiterocks	APR-JUL	18.7	23	30	52	42	59	58
DUCHESNE R nr Randlett	APR-JUL	25	48	65	20	166	315	328

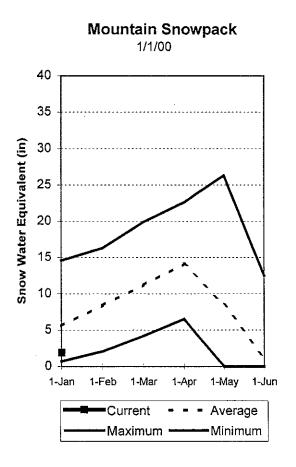
	AH BASIN & DAGGET S age (1000 AF) – End			UINTAH BASIN Watershed Snowpack.			, 2000	
Reservoir	Usable   Capacity	*** Usable Storage *** This Last Year Year Avg			Watershed D	Number This Year a of ====== Data Sites Last Yr A		r as % of Legal Average
FLAMING GORGE MOON LAKE RED FLEET STEINAKER STARVATION STRAWBERRY-ENLARGED	3749.0 49.5 25.7 33.4 165.3 1105.9	3269.0 29.8 20.4 21.3 133.0 940.0	3401.0 31.0 20.5 33.1 128.8 1001.0	27.3 18.2 105.2	UPPER GREEN RIVER in UTA ASHLEY CREEK BLACK'S FORK RIVER SHEEP CREEK DUCHESNE RIVER LAKE FORK-YELLOWSTONE CR STRAWBERRY RIVER UINTAH-WHITEROCKS RIVERS UINTAH BASIN & DAGGET SC	2 2 1 11 5 4 4 2	76 52 89 91 53 58 63 30 63	55 28 65 81 36 42 29 29

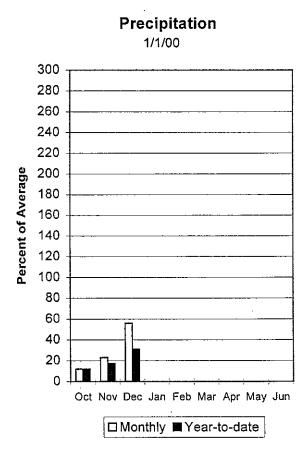
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

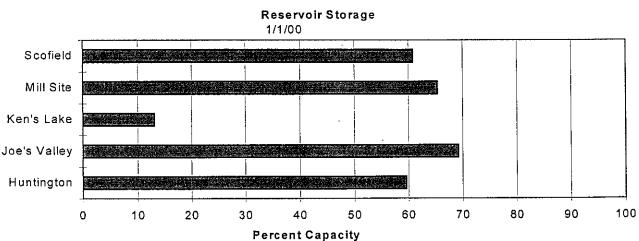
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) - The value is natural flow - actual flow may be affected by upstream water management.

#### Carbon, Emery, Wayne, Grand and San Juan Co. Jan 1, 2000

Snowpacks in this region are at 34% of average, only 54% of last year. Individual sites range from 4% to 51% of average. This is the lowest Jan 1 snowpack since 1977. Extremely dry fall weather has depleted soil moisture which could have an adverse affect on spring runoff. Precipitation during Dec was much below average at 56%, bringing the seasonal accumulation (Oct-Dec) to a meager 31% of normal. Reservoir storage is in excellent shape at 64% of capacity. Springtime runoff conditions are very poor and there is only a 21% chance of reaching an average snowpack by April. Individuals relying on direct streamflow should prepare for a marginal runoff season.







#### CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - January 1, 2000

=======================================	=======	   <<=====	Drier ====	== Future Co	enditions =	====== Wette	, ====>> :=======	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	= Chance Of E 50% (Most (1000AF)		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Gooseberry Creek nr Scofield	APR-JUL	2.0	5.2	7.5	64	9.8	14.2	11.7
Scofield Reservoir inflow	APR-JUL	7.0	23	30	68	37	68	44
White River blw Tabbyune Creek	APR-JUL	0.6	5.9	9.0	48	12.7	21	18.7
Green River at Green River, UT	APR-JUL	504	1170	1700	54	2230	3151	3151
Electric Lake inflow	APR-JUL	3.5	6.4	9.0	60	12.3	18.5	15.1
HUNTINGTON CK nr Huntington	APR-JUL	4.9	16.2	25	61	34	51	41
JOE'S VALLEY RESV Inflow	APR-JUL	10.1	24	35	66	46	64	53
Ferron Creek nr Ferron	APR-JUL	12.8	19.6	25	64	31	41	39
Colorado River nr Cisco	APR-JUL	511	1636	2400	58	3164	4289	4132
Mill Creek at Sheley Tunnel nr Moab	APR - JUL	1.44	2.07	3.60	60	5.13	7.39	6.00
Indian Creek Tunnel nr Monticello	MAR - JUL	0.06	0.13	0.16	19	0.67	1.43	0.86
Indian Creek abv Cottonwood Creek	MAR - JUL	0.18	0.38	0.48	19	1.97	4.17	2.55
Seven Mile Creek nr Fish Lake	APR-JUL	1.82	2.92	4.50	69	6.08	8.40	6.50
Muddy Creek nr Emery	APR-JUL	3.5	7.6	12.0	61	16.4	23	19.6
North Ck ab R.S. nr Monticello	MAR-JUL	0.00	0.02	0.16	12	0.90	3.07	1.35
South Ck ab Lloyd's Res nr Monticell		0.00	0.02	0.16	12	0.46	1.17	1.31
Recapture Ck bl Johnson Ck nr Blandi		0.12	0.24	0.33	5	2.80	6.44	6.07
San Juan River nr Bluff		199	285	500	43	715	1031	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Reservoir Storage (1000 AF) - End of December

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - January 1, 2000

Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge *** Avg	Watershed [	Number of Data Sites	This Yea	r as % of Average
HUNTINGTON NORTH JOE'S VALLEY KEN'S LAKE MILL SITE SCOFIELD	4.2 61.6 2.3 16.7 65.8	2.5 42.6 0.3 10.9 40.0	3.8 47.6 1.3 13.8 43.0	2.0 42.7 3.0 30.3	PRICE RIVER SAN RAFAEL RIVER MUDDY CREEK FREMONT RIVER LASAL MOUNTAINS BLUE MOUNTAINS WILLOW CREEK CARBON, EMERY, WAYNE, GR	3 3 1 3 1 1 1	84 77 42 26 64 14 23	38 45 21 27 32 10 30 34

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

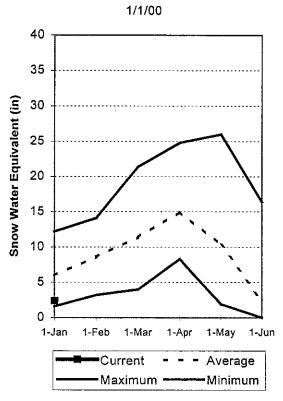
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

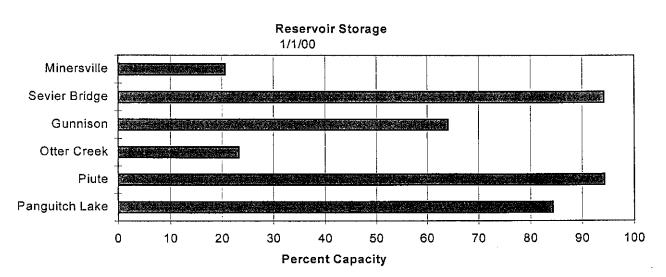
#### Sevier and Beaver River Basins Jan 1, 2000

Snowpacks on the Sevier River Basin are much below normal at 41% of average, just 55% of last year. This is the lowest Jan 1 snowpack since 1990 and there is just a 21% chance of reaching average conditions by April. Individual sites range from 0% to 94% of average. Precipitation during Dec was much below average at 66% of normal, bringing the seasonal accumulation (Oct-Dec) to 66% of average. Reservoir storage is in excellent condition at 83% of capacity. General snowmelt water supply conditions are exceptionally poor. Those on direct streamflow should prepare for a marginal year. Otter Creek and Minersville Reservoirs have been under repair but will both store water this year.

#### **Mountain Snowpack**



#### Precipitation 1/1/00 Percent of Average Oct Nov Dec Jan Feb Mar Apr May Jun ☐ Monthly ■ Year-to-date



#### SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - January 1, 2000

	========		: Drier ====	Eutupo Ca	ensuessesses malitions	====== Wetter	========	
		``	Di lei	ratare co	MAILTONS -	Wecter		
Forecast Point	Forecast	======	========	Chance Of E	xceeding *		======	
	Period	90% (1000AF)	70% (1000AF)	50% (Most (1000AF)	Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SEVIER R at Hatch	APR-JUL	14.0	17.8	26	48	43	70	54
SEVIER R nr Circleville	APR-JUL	30	33 37	40	53 54	59	88	75
SEVIER R nr Kingston	APR-JUL	28	37	45	54	65	99	83
ANTIMONY CK nr Antimony	APR-JUL	1.04	2.19	3.20	43	4.21	6,22	7.40
E F SEVIER R nr Kingston	APR-JUL	4.8	6.9	13.2	44	24	41	30
SEVIER R blw Piute Dam	APR-JUL	23	32	52	45	83	136	115
CLEAR CK nr Sevier	APR-JUL	4.2	6.1	9.2	44	14.2	22	21
SALINA CK at Salina	APR-JUL	0.5	2.6	11.4	65	20	37	17.6
PLEASANT CK nr Pleasant	APR-JUL	3.99	4.42	5.60	66	6.78	9.01	8.50
EPHRAIM CK nr Ephraim	APR-JUL	4.3	5.4	6.3	50	8.5	12.5	12.6
SEVIER R nr Gunnison	APR-JUL	65	79	108	45	192	335	239
CHICKEN CK nr Levan	APR-JUL	0.63	1.26	2.00	43	3.18	6.31	4.70
OAK CK nr Oak City (Acre Feet)	APR-JUL	343	559	780	44	1088	1776	1777
BEAVER R nr Beaver	APR-JUL	7.3	9.1	10.5	40	12.2	15 <b>.1</b>	26
MINERSVILLE RESERVOIR Inflow	APR-JUL	2.8	4.6	6.5	39	9.1	15.1	16.7

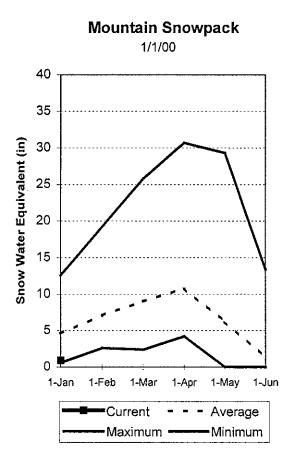
Reservoir Storage	(1000 AF) - End			SEVIER & BEAN Watershed Snowpack			, 2000	
Reservoir	Usable *** Usable Storage ***  Capacity This Last Year Year Avg			" I	Watershed	Number of Oata Sites	This Yea	r as % of
	*******		=======	=======	=======================================			
GUNNISON	20.3	13.0	18.3	9.5	UPPER SEVIER RIVER (sout	:h 8	35	30
MINERSVILLE (RkyFd)	23.3	4.8	24.5	9.3	EAST FORK SEVIER RIVER	3	21	23
OTTER CREEK	52.5	12.2	45.6	23.8	SOUTH FORK SEVIER RIVER	5	45	34
PIUTE	71.8	67.7	60.5	29.3	LOWER SEVIER RIVER (incl	.u 6	97	62
SEVIER BRIDGE	236.0	222.3	210.1	87.0	BEAVER RIVER	2	20	15
PANGUITCH LAKE	22.3	18.8	20.1		SEVIER & BEAVER RIVER BA	NS 16	<b>5</b> 5	41

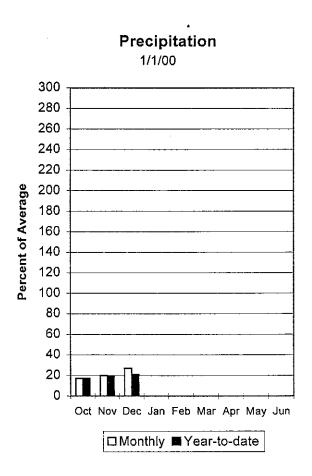
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

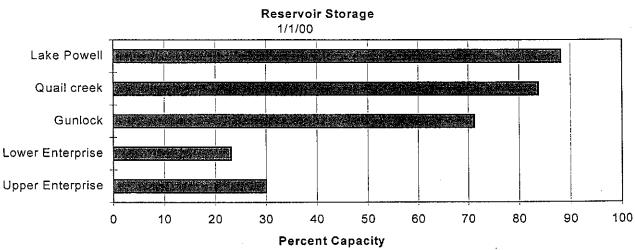
 <sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

#### E. Garfield, Kane, Washington, & Iron co. Jan 1, 2000

Snowpacks in this region are much below normal at 20% of average, about 26% of last year. This is the lowest Jan 1 snowpack since 1990. Individual sites range from 0% to 38% of average. Extremely dry fall weather has depleted soil moisture which may have an adverse affect on springtime runoff. Precipitation was much below normal during Dec at 27% of average, bringing the seasonal accumulation (Oct-Dec) to a paltry 21% of normal. Reservoir storage is in excellent shape at 71% of capacity. General water supply conditions are much below average. Water users on direct streamflow should prepare for a poor runoff season.







E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - January 1, 2000

		=========	==========	==========		==========	=======	
		<<=====	Drier ====	≕ Future C	onditions	====== Wetter	=====>>	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lake Powell inflow Virgin River nr Virgin Virgin River nr Hurricane	APR-JUL APR-JUL APR-JUL	1597 11.9 8.6	2590 17.5 28	4000 30 33	52 46 46	5410 46 48	7485 83 90	7735 66 72
Santa Clara River nr Pine Valley Coal Creek nr Cedar City	APR-JUL APR-JUL	0.80 4.1	1.31 5.1	2.50 7.9	47 42	4.08 11.4	8.06 23	5.30 18.8

E. GARFIELD, KAR Reservoir Storage					E. GARFIELD, KANE, Watershed Snowpack			
Reservoir	Usable Capacity		able Stora Last	ige ***	Watershed	Number of	This Yea	as % of
		Year	Year	Avg	[	Data Sites	Last Yr	Average
GUNLOCK	10.4	7.4	10.1		VIRGIN RIVER	 5	31	22
LAKE POWELL	24322.0	21443.0	21654.0		PAROWAN	2	29	24
QUAIL CREEK	40.0	33.5	36.0		ENTERPRISE TO NEW HARMON	NY 2	60	7
UPPER ENTERPRISE	10.0	3.0	7.5		COAL CREEK	2	29	19
LOWER ENTERPRISE	2.6	0.6	0.6		ESCALANTE RIVER	2	15	20
					E. GARFIELD, KANE, WASH	IN 9	26	20

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) - The value is natural flow - actual flow may be affected by upstream water management.

SNOW COURSE DATA
FOR THE DATE OF UTAH
As of JANUARY 2000

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	MONS	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
AGUA CANYON SNOTEL	8900	1/01	1	0.1	3.4	3.2	DRY FORK SNOTEL	7160	1/01	ŧ	6.4	4.7	8.6
ALTA CENTRAL	8800	12/28	36	8.6	10.8	19.0	EAST WILLOW CREEK SN	8250	1/01	ı	9.0	2.6	2.0
BEAVER DAMS SNOTEL	8000	1/01	ı	1.5	2.0	4.6	FARMINGTON CN SNOTEL	8000	1/01	ı	6.2	8.2	12.3
BEAVER DIVIDE SNOTE	8280	1/01	1	2.4	2.4	4.8	FARMINGTON CANYON L.	6950				ı	ı
BEN LOMOND PK SNOTL	8000	1/01	ı	3.7	9.9	15.9	FARNSWORTH LK SNOTEL	0096	1/01	ı	4.9	8.1	8.7
BEN LOMOND TR SNOTL	0009	1/01	ı	2.3	3.1	11.1	FISH LAKE	8700				1	
BEVAN'S CABIN	6450				ı		FIVE POINTS LAKE SNO	10920	1/01	ı	5.3	4.7	8.4
EL	10290	1/01	1	1.4	7.0	8.7	FRANCES FLATS	6700	12/29	22	6.1	4.8	9.6
BIRCH CROSSING	8100				ı	1	G.B.R.C. HEADQUARTER	8700				ı	J
BLACK FLAT-U.M. CK S	9400	1/01	1	1.7	2.3	4.2	G.B.R.C. MEADOWS	10000				1	ı
BLACK'S FORK GS-EF	9340				ı	ı	GARDEN CITY SUMMIT	2600				1	ı
BLACK'S FORK JUNCIN	8930				ı		GEORGE CREEK	8840				ı	ı
BOX CREEK SNOTEL	0086	1/01	ı	2.7	5.0	5.5	GOOSEBERRY R.S.	8400				i	1
BRIAN HEAD	10000				ı	ı	GOOSEBERRY R.S. SNOT	7900	1/01	1	3.1	2.4	3.8
BRIGHTON SNOTEL	8750	1/01	1	4.6	5.4	8.9	HARDSCRABBLE SNOTEL	7250	1/01	ı	3.5	2.9	6.9
BRIGHTON CABIN	8700	1/03	30	5.8	8.5	12.5	HARRIS FLAT SNOTEL	7700	1/01	ı	0.4	6.0	3.1
TEL	10600	1/01	ı	2.0	7.2	8.5	HAYDEN FORK SNOTEL	9100	1/01	ı	9.6	4.8	6.8
BRYCE CANYON	8000	•			i	2.0		10000				ı	,
BUCK FLAT SNOTEL	0086	1/01	ı	3.7	4.5	7.2	HEWINTA SNOTEL	9500	1/01	ι	2.4	3.1	3.9
BUCK PASTURE	9700				ı	1	HICKERSON PARK SNOTE	9100	1/01	ı	2.1	2.3	2.6
BUCKBOARD FLAT	0006					ı	HIDDEN SPRINGS	5500	12/29	7	1.6	6.0	4.5
BUG LAKE SNOTEL	7950	1/01	ı	2.5	5.1	8.8	HOBBLE CREEK SUMMIT	7420				ı	ı
BURT'S-MILLER RANCH	1900				1	ı	HOLE-IN-ROCK SNOTEL	9150	1/01	ı	2.1	2.9	2.3
CAMP JACKSON SNOTEL	8600	1/01	1	0.4	2.8	4.0	HORSE RIDGE SNOTEL	8260	1/01	ι	3.4	5.9	10.0
CASTLE VALLEY SNOTL	9580	1/01	ı	2.2	4.7	5.2	HUNTINGTON-HORSESHOE	0086				t	1
CHALK CK #1 SNOTEL	9100	1/01	ŀ	5.5	5.7	10.3	INDIAN CANYON SNOTEL	9100	1/01	ı	1.4	2.2	4.1
CHALK CK #2 SNOTEL	8200	1/01	ı	4.2	5.1	6.7	JOHNSON VALLEY	8850				1	ı
CHALK CREEK #3	7500				ı		KILFOIL CREEK	7300				1	1
CHEPETA SNOTEL	10300	1/01	ı	1.5	5.2	6.1	KILLYON CANYON	6300	12/28	10	1.9	1.8	4.7
CITY CREEK	7500	12/29	25	8.2	5.7	15.7	KIMBERLY MINE SNOTEL	9300	1/01	ı	4.5	5.2	5.8
CLEAR CK RIDG #1 SNT	9200	1/01	ı	3.2	3.0	8.1	KING'S CABIN SNOTEL	8730	1/01	ı	1.2	2.9	5.4
CLEAR CK RIDG #2 SNT	8000	1/01	•	2.8	2.7	6.1	KLONDIKE NARROWS	7400				ı	
CORRAL	8200				ı	ı		9250	1/01	ı	2.5	6.9	7.2
CURRANT CREEK SNOTEL	8000	1/01	ı	1.3	2.7	4.3	LAKEFORK #1 SNOTEL 1	10100	1/01	ı	1.9	4.5	5.2
DANIELS-STRAWBERRY S	8000	1/01	1	2.2	т Э	7.3	Œ	10900	1/01		4.2	6.9	9.6
DESERET PEAK (d)	9250				•		LAKEFORK MOUNTAIN #3	8400				1	I
DESERET PEAK AM (d)	9250				ı	ı	LAMBS CANYON	7400	12/30	22	4.9	5,6	7.3
DESERET PEAK SNO (d)	9250				4.	7.7	LASAL MOUNTAIN LOWER	8800				1	ı
NOTE	9200	1/01	1	1.3	3.1	6.2	LASAL MOUNTAIN SNOTE	9850	1/01	ı	1.8	2.8	5.6
DONKEY RESERVOIR SNO	0086	1/01	1	₽· E	5.0	3.7	LILY LAKE SNOTEL	9050	1/01	1	2.9	4.7	6.2
DRY BREAD POND SNOTE	8350	1/01	1	3.1	5.5	9.6	LITTLE BEAR LOWER	0009				ı	1

LAST AVERAGE		Z.5 4.5 _		ar 2			n	1 4	7	ı •																				-																				
WATER L		۲.0	0				# -	•																																										
SNOW	uragn	ı	ļ			1 1	l	,	I																																									
DATE	,	1/01	1/01	T0/T	.07	1/01	TO /T	1 / 01	10/1								-																																	
ELEV.	0	9400	7 200	0 0 0	0/0/	9200	0000	0200		9000	00/0																																							
SNOW COURSE	THE PROPERTY OF THE PARTY OF TH	HOUSE CREEK SMOLES	TELLIN SECONDAY	THE CHARLES SECTION	TWO TTA	WEBSIEN FLAT SNOTEL	WHITE DIVERS #5	WILLE ALVEA #3	TOTOTO NO SECTION		THINEE RESERVOIR																									٠														
AVERAGE	00-1001		י נית		1 5	, - 7	,	7 4	, r	ים יים		0.0	) ·	10.1		11.0	4.5	1	1	6.1		8.1	8.2	•	7.9	6.7	7.7	7.5	ı	ı	4.1	11.8	7.1	10.6	80	15.0	1 1	7.0	: 1	8.0	1	1	7.9	1	1	9.4	14.5	1 1	10.8	
LAST	1		, c	9 0	. 0	9. 1	ı	7		7 : 1 F	1 -		- ·	4.0	10	7.3	5.0	,	ı	1	ı	2.0	4.0	ı	ж 8	т. т.	4.7	3.4	ı	ı	2.5	6.4	6.4	₹.	. S	7.5	1 1	C.	) )	2.8	1	1	6.0	; ;	1	5.4	12.7	ı ı	5.0	
WATER	1 1		. ~	,	•	٠	رب د	) (r		9	•		ים מים	ກ່າ	0 00	4.7	1.6					4.4	3.6	6.1	4.4	4.0	7.2	2.8			1.6	6.2	m m	5.4	3.7	7.8		A	) -	2.0			4.0			2.7	7.2		5.0	
SNOW		· I	1		1	Ì	1	ı	ı			, ,	<b>C</b> 7	1 6	ן ו נ	,	ı					19	1	1		1	1				ı	,		90	ı			1		1			1			ı	ı		ı	
DATE	,	1/01	1/07	107	70/7	T/ 0.T	1/01	1/0/1	1/07	T) 07	1,01	10/1	12/30	1/01	1/07	1/01	1/01					12/30	1/01	1/01	1/01	1/01	1/01	1/01			1/01	1/01	1/01	1/03	1/01	1/01		1/01	i 2	1/01			1/01	<u>.</u>		1/01	1/01		1/01	
ELEV.	i i	0000	8000		000	0200	6700	00/0	9750	00/00	000	0006	0660	3460	8000	8960	9500	9500	8600	7760	8200	7500	7500	7740	8050	0096	8800	9200	8200	7300	7900	8900	10000	8730	7600	9700	0000	10100	8550	8400	8200	8800	9200	8500	9100	8140	8400	6250	0966	
SNOW COURSE	THE CASE OF THE PARTY OF THE PA	TITTE BEAK SNOTED		TOTAL SHOTTER STATE	TOMO VALLES DOLL SEL	TOSH CREEK DESPET	TOTTS MENDOM SNOWET	MANAGER FIRE COMPONED SNF	MANAGEMENT OF THE CANON	MERCHANI VALLEI SNOI	MIDDLE CANION	Military Valies Shotes	MILL CREEN	MILL-D NORTH SNOTEL		MONTE CRISTO SNOTEL	MOSBY MIN. SNOTEL	MT.BALDY R.S.	MUD CREEK #2	OAK CREEK	PANGUITCH LAKE R.S.	PARLEY'S CANYON SUM.	PARLEY'S CANYON SNOT	PARRISH CREEK SNOTEL	PAYSON R.S. SNOTEL	PICKLE KEG SNOTEL	PINE CREEK SNOTEL	RED PINE RIDGE SNOTE	REDDEN MINE LOWER	REES'S FLAT	ROCK CREEK SNOTEL	z		SILVER LAKE (BRIGHT.)	SMITH MOREHOUSE SNIL	OTEL	SPIKIT LANE	ONO MOR	TATER CAMP	STRAWBERRY DIVIDE SN		TAIL POLES	THAYNES CANYON SNOTE	THISTLE FLAT	TIMBERLINE	TIMPANOGOS DIVIDE SN	TONY GROVE LK SNOTEL	TONY GROVE R.S.	TRIAL LAKE TRIAL LAKE SNOTEL	

UTAH SURFACE	WATER	SUPPLY	INDEX	
Snow Surveys	NRCS	USDA		
Basin or Region	SWSI/%	Percentile	Years with	Agricultural Water
			Similar SWSI	Shortage May Occur
				If SWS! Less Than
Bear River	-0.8	41%	79,87,98,99	-3.8
Ogden River	-2.6	19%	81,90,91,94	
Weber River	-1.9	27%	94,89,79,81	
Tooele Valley	NA			
Provo	-0.3	46%	78,88,79,81	
North Slope	NA			
West Uintah Basin	2.2	76%	87,86,97,99	
East Uintah Basin	-2.6	18%	96,94,92,88	
Price River	-0.5	44%	76,73,99,87	
San Rafael	-1.2	36%	91,76,88,99	
Moab	-2.4	21%	89,99,81,91	
Upper Sevier River	-2.1	25%	90,92,65,89	
Lower Sevier River	-0.7	42%	68,76,89,81	
Beaver River	-3.7	5%	77,61,63	
Virgin River	0.2	53%	86,94,97,92	
Snow Surveys			SWSI Scale: -4 to 4	
245 N Jimmy Doolittle	Rd		Percentile: 0 - 100%	L
Salt Lake City, UT				
(801) 524-5213				

Issued by

Pearlie S. Reed
Chief
Autural Resources Conservation Service
U.S. Department of Agriculture

Released by

Phillip J. Nelson State Conservationist Natural Resources Conservation Service Salt Lake City, Utah

YOU MAY OBTAIN THIS PRODUCT BY VISITING OUR WEB SITE @: http://utsnow.nrcs.usda.gov



245 North Jimmy Doolittle Road Salt Lake City, UT 84116



# Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT





Natural Resources Conservation Service

# Utah Basin Outlook Report February 1, 2000



## Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Vane O. Campbell, Area Conservationist, 340 N. 600 E., Richfield, UT 84701 - Phone: (435) 896-6441
Todd C. Nielson, Area Conservationist, 302 E. 1860 S., Provo, UT 84606 - Phone: (801) 377-5580
David M. Webster, Area Conservationist, 240 W. HWY 40, 333-4, Roosevelt, UT 84006 - Phone: (435)722-4261

#### How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation and marital or family status. (Not all prohibited bases apply to all programs.)

Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326 W, Whitten Building, 14th and Independence Ave., SW, Washington, D.C., 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

#### STATE OF UTAH GENERAL OUTLOOK Feb 1, 2000

#### SUMMARY

As anticipated last month, snowpacks, which started the year off in the cellar, remain in the cellar, but showed some modest gains during January. Snowpacks generally increased 10% to 30% of average relative to January. Northern Utah had the most significant increases in snowpack whereas southern Utah received far less. snowpacks are below normal across the state due to warm temperatures. In general, snowpacks range from 37% on the Virgin to 71% of normal on the Bear and Weber Rivers. Statewide, weather conditions must average nearly 150% of normal over the next two months in order to reach average snowpack conditions by April. The probability of getting 150% of average snowpack accumulation from January through March is just 5%. There is a high probability (80%-90%)) that snowpacks will increase from where they are now. Getting even higher snowpack accumulations between now and April is certainly possible although not nearly as probable. Specific climatic conditions over the next two months will determine how the runoff season of 2000 ends up. January precipitation across the state was above normal, (126%) more in the north (135%) than in the south This brings the seasonal total (Oct-Jan) to 62% of normal statewide. An unusually dry fall has severely depleted soil moisture, which, in turn, could adversely affect spring snowmelt runoff. A much higher than normal amount of snowmelt could be infiltrated to the soil, leaving less for streamflow. Reservoir storage is generally in excellent condition at 83% of capacity. Most operators are following a conservative strategy in anticipation of a marginal runoff year. Streamflow forecasts call for below to much below normal April-July runoff statewide. Water managers should prepare for a marginal streamflow season.

#### **SNOWPACK**

February first snowpacks in Utah, as measured by the NRCS SNOTEL system, are below to much below average statewide. In northern Utah, snowpacks are an unusually consistent 70% of normal over the Bear, Weber, Provo and Duchesne Rivers. There is only a 5% to 15% chance of receiving enough snow over the next three months to reach average conditions by April. In southern Utah, snowpacks range from 37% on the Virgin Basin to 65% of average on the Sevier. Lower elevation snowpacks have proportionately less snow due to warmer than normal temperatures and may have little contribution to runoff. This condition may persist throughout the snow accumulation and melt season, as was the case last year.

#### PRECIPITATION

Mountain precipitation during January was above to much above average statewide, with one exception, the Virgin Basin. The Virgin watershed received only 87% of normal

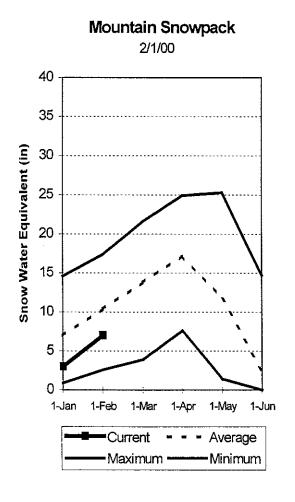
precipitation whereas the rest of the state ranged from 117% to 144% of average. This brings the seasonal accumulation (Oct-Jan) up to 62% of average statewide. The seasonal accumulation was just 39% of normal last month.

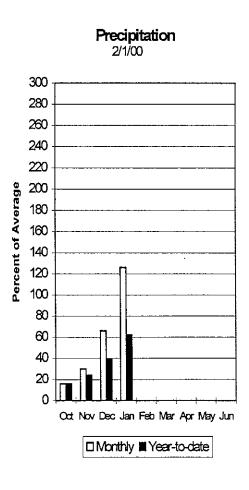
#### RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 83% of capacity. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible in anticipation of a poor runoff season. Both Minersville and Otter Creek Reservoirs, which have undergone recent repairs, are currently storing water.

#### STREAMFLOW

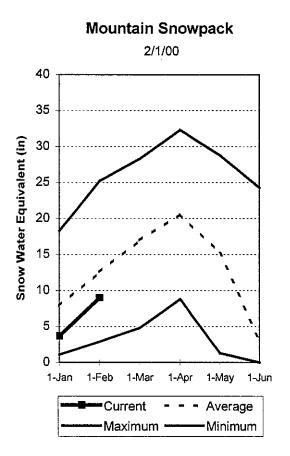
Snowmelt streamflows are expected to be below to much below average across the entire state of Utah this year. Streamflows will most likely have lower peaks and low volumes this runoff season. There are still two snowpack accumulation months ahead and any streamflow outcome is still possible, including above average flows. However, the greatest probability at this point, is for a relatively poor runoff season. Those on direct streamflow should prepare for a very poor season.

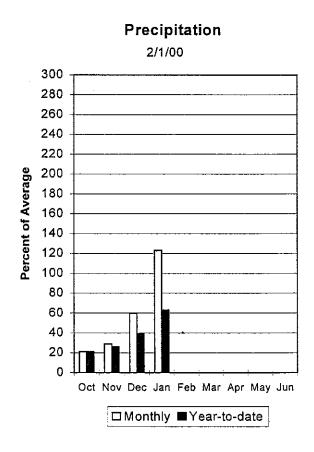


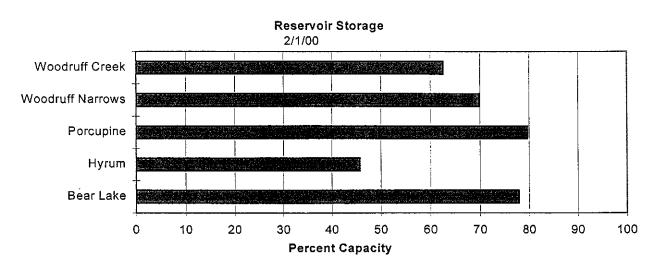


#### Bear River Basin Feb 1, 2000

Snowpacks on the Bear River Basin are much below average at 71% of normal, about 81% of last year and up 24% relative to last month. Specific sites range from 29% to 101% of normal. There is less than a 10% chance of getting back to average or above by April. Fall weather was extremely dry depleting soil moisture, which may have an adverse affect on spring runoff. January precipitation was above normal at 123%, which brings the seasonal accumulation (Oct-Jan) to 63% of average. Reservoir storage is at 77% capacity. In general, spring runoff conditions are much below average.







#### BEAR RIVER BASIN

#### Streamflow Forecasts - February 1, 2000

		<<=====	Drier ====	== Future Co	onditions =	====== Wetter	=====>>	**************************************
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear R nr UT-WY State Line	APR-JUL	54	66	75	65	85	104	115
BEAR R nr Woodruff, UT BIG CK nr Randolph	APR-JUL	49	70	90	60	115	165	149
Brd Ck III Kandorph	APR-JUL	0.08	0.68	2.20	58	3.72	5.95	3.80
BEAR R nr Randolph, UT	APR-JUL	7.0	50	80	68	110	153	118
SMITHS FK nr Border, WY	APR-JUL	46	58	69	68	82	104	102
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	9.5	13.9	18.0	55	23	34	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	44	107	150	52	193	256	288
MONTPELIER CK nr Montpelier (Disc)(2	APR - JUL	3.9	5.2	6.2	51	7.5	9.8	12.2
CUB R nr Preston	APR-JUL	15.6	24	30	64	36	44	47
L BEAR R at Paradise, UT	APR-JUL	13.2	17.9	22	49	27	37	45
LOGAN R nr Logan	APR-JUL	41	53	63	59	75	97	107
BLACKSMITH Fk nr Hyrum	APR-JUL	17.5	23	27	50	32	42	54

Reservoir Stor	age (1000 AF) - End	of Janua	ary		Watershed Snowpa	ck Analysis	- February	1, 2000
Reservoir	Usable Capacity		able Stora Last Year	ge *** Avg	Watershed	Number of Data Sites	======	r as % of
BEAR LAKE HYRUM	 1421.0 15.3	1110.6	1136.4 10.9	978.0 10.3	BEAR RIVER, UPPER (ab BEAR RIVER, LOWER (bl		91 75	77 67
PORCUPINE WOODRUFF NARROWS	11.3 57.3	9.0 40.0	0.0 45.0	2.9	LOGAN RIVER RAFT RIVER	4 1	70 96	67 101
WOODRUFF CREEK	4.0 ==========	2.5 ======	3.8 =======	 ========	BEAR RIVER BASIN	14 ========	81 ========	71 ========

BEAR RIVER BASIN

The average is computed for the 1961-1990 base period.

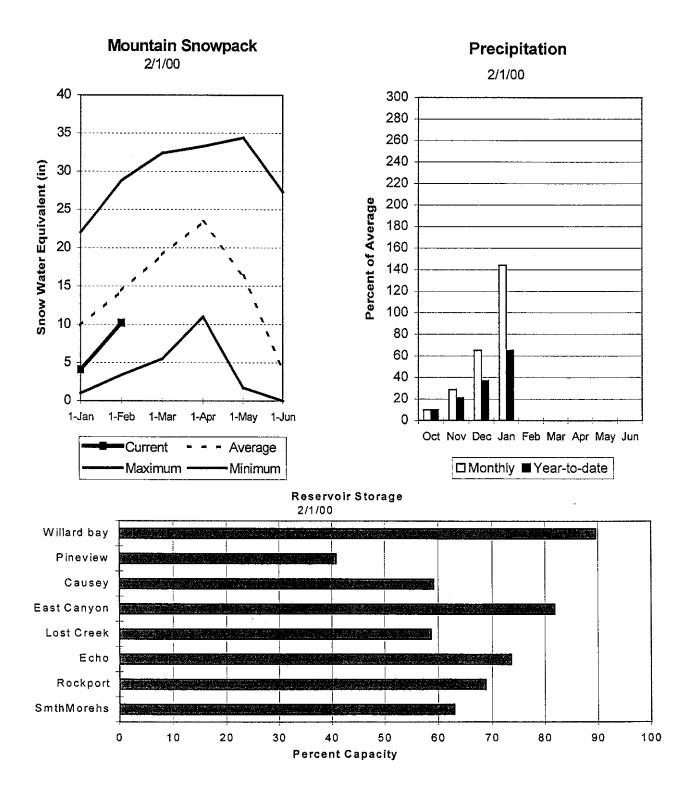
BEAR RIVER BASIN

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) The value is natural flow actual flow may be affected by upstream water management.

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

#### Weber and Ogden River Basins Feb 1, 2000

Snowpack on the Weber and Ogden Watersheds is at 71% of average, 88% of last year and up 30% relative to last month. Individual sites range from 44% to near 98% of average. There is only a 10% chance of average or above by April. Fall weather was extremely dry depleting soil moisture which could have and adverse impact on spring runoff. Precipitation during Jan was above normal at 144% of average, bringing the seasonal accumulation (Oct-Jan) to 63% of average. Reservoir storage on the Weber system is at 73% of capacity. Spring runoff conditions are much below average.



## WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - February 1, 2000

=======================================		=========	========	=========				
		<<=====	: Drier ====	== Future Co	onditions =	===== Wetter	· ====>>	
Forecast Point	Forecast	1	=========	- Chance Of E	Exceeding * :	************	======	
	Period	90% (1000AF)	70% (1000AF)		Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	6.4	13.3	18.0	60	23	30	30
WEBER R nr Oakley	APR-JUL	46	67	82	67	97	118	122
ROCKPORT RESERVOIR inflow	APR-JUL	35	65	85	63	105	135	134
CHALK CK at Coalville, Ut	APR-JUL	0.8	17.0	28	64	39	55	44
WEBER R nr Coalville, Ut	APR-JUL	35	66	87	64	108	139	136
ECHO RESERVOIR Inflow	APR-JUL	39	84	114	65	144	189	176
LOST CK Res Inflow	APR-JUL	0.5	4.3	9.5	55	14.7	22	17.2
E CANYON CK nr Morgan	APR-JUL	6.3	14.5	20	67	26	34	30
WEBER R at Gateway	APR-JUL	146	187	215	62	243	284	347
S FORK OGDEN R nr Huntsville	APR-JUL	11.2	26	36	57	46	61	63
PINEVIEW RESERVOIR Inflow	APR-JUL	16.0	50	74	60	98	132	124
WHEELER CK nr Huntsville	APR-JUL	0.86	2.25	3.20	52	4.15	5.54	6.20

WEBER & OGDEN Reservoir Storage (10			гу		WEBER & OGDEN Watershed Snowpack		+	1, 2000
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge *** Avg	Watershed	Number of Data Sites	This Yea	r as % of
CAUSEY EAST CANYON ECHO LOST CREEK PINEVIEW ROCKPORT WILLARD BAY	7.1 49.5 73.9 22.5 110.1 60.9 215.0	4.2 40.5 54.4 13.2 44.9 41.9 192.6	3.3 38.8 59.0 0.9 84.6 42.1 187.9	2.2 34.7 45.8 13.1 49.6 31.9 110.6	OGDEN RIVER WEBER RIVER WEBER & OGDEN WATERSHED	4 9 S 13	74 96 88	56 80 71

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

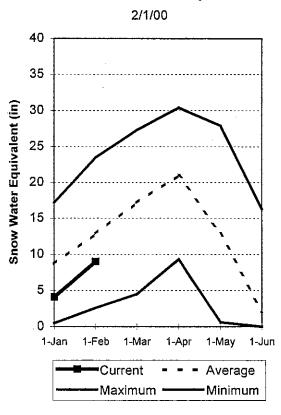
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

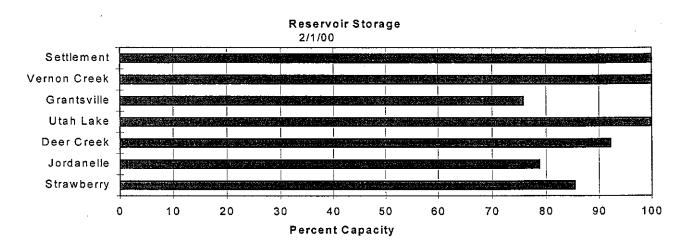
#### Utah Lake, Jordan River & Tooele Valley Basins Feb 1, 2000

Snowpacks over these watersheds are below average at 70% of normal, about the same as last year, up 23% relative to last month. Individual sites range from 31% to 92% of average. There is only a 13% chance of getting back to average or above by April. Fall weather was extremely dry depleting soil moisture, which could have an adverse affect on spring runoff. Precipitation during Jan was above normal at 135%, bringing the seasonal accumulation (Oct-Jan) to 69% of average. Reservoir storage is at 90% of capacity. Spring runoff conditions are much below normal. Water users on direct streamflow should prepare for a marginal runoff season.

#### **Mountain Snowpack**



#### Precipitation 2/1/00 Percent of Average Oct Nov Dec Jan Feb Mar Apr May Jun ☐ Monthly ■ Year-to-date



#### UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - February 1, 2000

=======================================				=========	,		========	
		<<======	Drier ====	== Future Co	onditions =	===== Wetter	====>>	
Forecast Point	Forecast		=========	= Chance Of 5	Exceeding *			
	Period	90%	70%		Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)		(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=======================================	=========		=======	========		==========	========	
PAYSON CK nr Payson	APR-JUL	1.32	1.67	2.80	64	3.93	6.29	4.40
SPANISH FORK nr Castilla	APR-JUL	7.4	21	45	61	69	110	74
HOBBLE CK nr Springville	APR-JUL	1.3	7.9	11.3	60	14.7	21	18.8
PROVO R nr Hailstone	APR-JUL	31	55	71	65	87	112	109
PROVO R below Deer Creek Dam	APR-JUL	13.0	55	81	63	107	148	128
AMERICAN FORK or American Fk.	APR-JUL	6.1	13.0	17.2	54	21	28	32
UTAH LAKE inflow	APR-JUL	16.0	134	205	63	276	395	324
L COTTONWOOD CRK nr SLC	APR-JUL	19.9	26	30	77	34	42	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	16.7	24	28	74	32	39	38
PARLEY'S CK nr SLC	APR-JUL	1.1	5.5	9.3	59	13.1	19.6	15.9
MILL CK nr SLC	APR-JUL	1.11	3.09	4.30	66	5.51	7.47	6.50
DELL FK nr SLC	APR-JUL	0.92	2.78	4.40	62	6.02	8.88	7.10
EMIGRATION CK nr SLC	APR-JUL	0.42	1.39	2.80	67	4,21	6.51	4.20
CITY CK nr SLC	APR - JUL	1.08	3.89	5.60	68	7.31	10.13	8.30
VERNON CK nr Vernon (Acre Feet)	APR-JUL	351	502	640	48	816	1166	1340
SETTLEMENT CK nr Tooele (Acre Feet)	APR-JUL	366	690	1060	46	1629	3072	2300
S WILLOW CK nr Grantsville	APR-JUL	0.03	0.55	1.50	48	2.45	3.86	3.10
	TUCD 0 TOO			======== !				*************
UTAH LAKE, JORDAN R	TACK & IOOF	CC VALLEY			UIAH LAKE,	JORDAN RIVER	& TOULLE VI	ALLEY

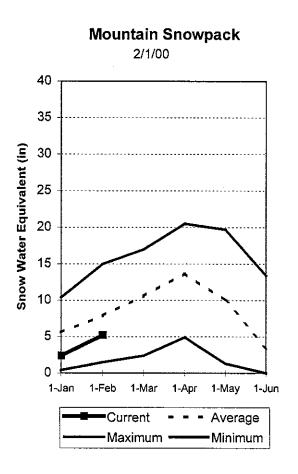
	age (1000 AF) - End				Watershed Snowpack			
Reservoir	Usable Capacity	*** Usa This Year	able Stora Last Year	ge ***	Watershed	Number of Data Sites		r as % of
			=======	======	******************			
DEER CREEK	149.7	138.0	122.4	94.3	PROVO RIVER & UTAH LAKE	7	<del>9</del> 7	67
GRANTSVILLE	3.3	2.5	2.8	[	PROVO RIVER	4	95	70
SETTLEMENT CREEK	1.0	1.0	1,0	0.5	JORDAN RIVER & GREAT SA	LT 6	98	74
STRAWBERRY-ENLARGED	1105.9	944.0	995.2		TOOELE VALLEY WATERSHED	s 3	88	64
UTAH LAKE	870.9	868.6	916.1	648.6	UTAH LAKE, JORDAN RIVER	& 16	96	70
VERNON CREEK	0.6	0.6	0.6		,			

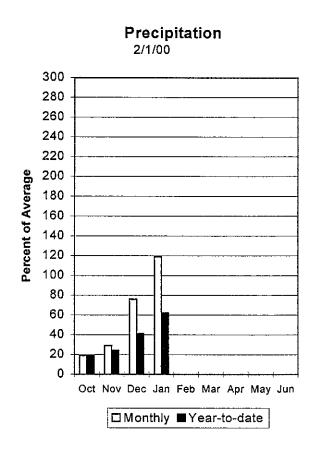
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

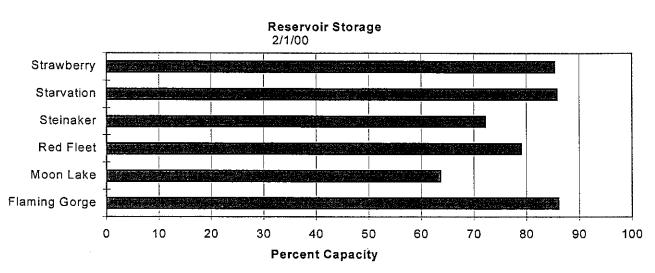
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.(2) - The value is natural flow - actual flow may be affected by upstream water management.

#### Uintah Basin and Dagget SCD's Feb 1, 2000

Snowpacks across the Uintah Basin and North Slope areas are much below average at 67%, just 75% of last year, but up 24% relative to last month. The North Slope ranges from 32% to 116% and the Uintah Basin ranges from 31% to 87% of average. Extremely dry fall weather has depleted soil moisture, which may adversely affect spring runoff. Precipitation during Jan was 119% of normal, bringing the seasonal accumulation (Oct-Jan) to 62% of average. Reservoir storage is excellent at 86% of capacity. Springtime runoff conditions are poor and there is less than a 5% chance of reaching an average snowpack by April.







#### UINTAH BASIN & DAGGET SCD'S Streamflow Forecasts - February 1, 2000

=======================================	=========	========		==========	3222222222		=======	
		<<======	Drier ====	≕= Future Co	onditions =	===== Wette	L ====>>	1
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Blacks Fork nr Robertson	APR-JUL	46	64	76	80	88	106	95
EF of Smiths Fork nr Robertson	APR-JUL	17.2	20	23	77	26	31	30
Flaming Gorge Reservoir Inflow	APR-JUL	454	752	900	<b>7</b> 5	1048	1351	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	4.8	9.1	12.0	61	14.9	19.2	19.8
Ashley Creek nr Vernal	APR-JUL	12.2	15.6	27	53	38	55	51
WF DUCHESNE RIVER nr Hanna	APR-JUL	7.2	11.0	14.0	54	17.4	23	26
DUCHESNE R nr Tabiona	APR-JUL	28	44	55	52	66	82	105
UPPER STILLWATER RESV inflow	APR-JUL	24	39	50	62	61	76	81
ROCK CK nr Mountain Home	APR-JUL	37	51	60	64	70	83	94
DUCHESNE R abv Knight Diversion	APR-JUL	49	85	110	58	135	171	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	14.4	24	32	54	41	57	59
CURRANT CREEK RESV Inflow	APR-JUL	4.8	9.1	12.0	57	14.9	19.2	21
STARVATION RESERVOIR inflow	APR-JUL	38	49	70	60	91	122	117
MOON LAKE Inflow	APR-JUL	21	33	42	61	51	63	69
Yellowstone River nr Altonah	APR-JUL	18.3	34	44	68	54	70	65
DUCHESNE R at Myton	APR-JUL	58	74	100	38	148	219	263
UINTA R nr Neola	APR-JUL	21	29	45	53	61	84	85
Whiterocks River nr Whiterocks	APR-JUL	15.3	16.5	30	52	44	63	58
DUCHESNE R nr Randlett	APR-JUL	72	85	95	29	196	345	328

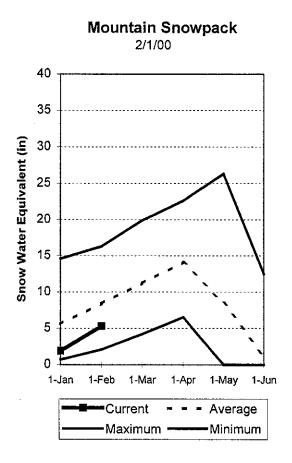
UINTAH BASIN & DAGGET SCD'S Reservoir Storage (1000 AF) - End of January					UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - February 1, 2000			
Reservoir	Usable Capacity	*** Usa This Year	able Stora Last Year	ge *** Avg	Watershed	Number of Data Sites		r as % of ======= Average
FLAMING GORGE MOON LAKE STEINAKER STEINAKER STEINAKER STARVATION STRAWBERRY-ENLARGED	3749.0 49.5 33.4 33.4 165.3 1105.9	3226.0 31.5 24.1 24.1 141.9 944.0	3341.0 32.4 29.1 29.1 133.8 995.2	29.1 19.7 19.7 113.0	UPPER GREEN RIVER in UT/ ASHLEY CREEK BLACK'S FORK RIVER SHEEP CREEK DUCHESNE RIVER LAKE FORK-YELLOWSTONE CF STRAWBERRY RIVER UINTAH-WHITEROCKS RIVERS UINTAH BASIN & DAGGET SO	2 2 1 11 RE 4 4 8 2	78 43 102 77 74 75 85 39 77	72 35 92 86 63 68 62 42 67

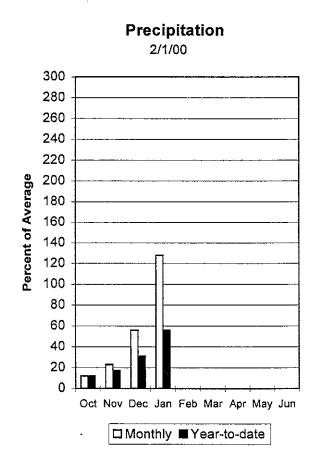
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

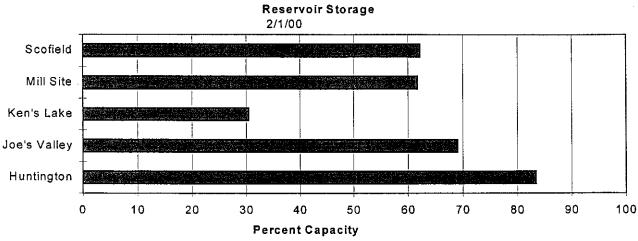
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

## Carbon, Emery, Wayne, Grand and San Juan Co. Feb 1, 2000

Snowpacks in this region are at 64% of average, only 87% of last year, but up 30% relative to last month. Individual sites range from 31% to 90% of average. Extremely dry fall weather has depleted soil moisture, which could have an adverse affect on spring runoff. Precipitation during Jan was above average at 128%, bringing the seasonal accumulation (Oct-Jan) to 56% of normal. Reservoir storage is in excellent shape at 65% of capacity. Springtime runoff conditions are very poor and there is only a 5% chance of reaching an average snowpack by April. Individuals relying on direct streamflow should prepare for a marginal runoff season.







# CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - February 1, 2000

=======================================	========	=========	========			==========	=========	
		<<=====	Drier ====	== Future Co	nditions =	===== Wetter	=====>>	
Formant Baint								
Forecast Point	Forecast	=======		Chance Of E		<b></b>		
	Period	90%	70%	50% (Most		30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Gooseberry Creek nr Scofield	*******							
Scofield Reservoir inflow	APR-JUL	3.0	6.5	8.5	73	10.5	13.9	11.7
	APR-JUL	2.2	24	30	68	36	68	44
White River blw Tabbyune Creek	APR-JUL	0.6	6.3	9.0	48	12.2	18.9	18.7
Green River at Green River, UT	APR-JUL	1041	1731	2200	70	2669	3359	3151
Electric Lake inflow	APR-JUL	3.8	6.3	8.5	56	11.1	16.0	15.1
HUNTINGTON CK or Huntington	APR-JUL	4.9	18.0	25	61	32	49	41 .
					٥.	]	77	71
JOE'S VALLEY RESV Inflow	APR-JUL	15.1	23	33	62	43	58	53
Ferron Creek nr Ferron	APR-JUL	15.9	22	27	69	32	41	39
Colorado River nr Cisco	APR-JUL	1038	2027	2700	65	3373	4362	4132
Mill Creek at Sheley Tunnel nr Moab	APR-JUL	1.14	3.02	4.30	72	5.58	7.46	6.00
Indian Creek Tunnel nr Monticello	MAR-JUL	0.10	0.20	0.28	33	0.61	1.10	
Indian Creek aby Cottonwood Creek	MAR-JUL	0.10						0.86
Thorain creek aby cottonwood creek	MAK-JUL	0.25	0.48	0.65	26	1.66	3.15	2.55
Seven Mile Creek nr Fish Lake	APR-JUL	2.02	3.29	5.10	79	6.91	9.59	6.50
Muddy Creek nr Emery	APR-JUL	4.7	7.4	12.0	61	16.6	23	19.6
North Ck ab R.S. nr Monticello	MAR-JUL	0.09	0.20	0.26	19	0.93	2.67	1.35
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	0.09	0.20	0.25	19	0.48	0.96	1.31
Recapture Ck bl Johnson Ck nr Blandi	MAR-JUL	0.42	0.79	1.10	18	2.74	5.16	6.07
San Juan River nr Bluff	APR-JUL	95	164	290	25	481	762	1152
	========		========		=======		=======================================	

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Reservoir Storage (1000 AF) - End of January CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - February 1, 2000

Reservoir	Usable Capacity	*** Usa This	ble Storas	je ***	Watershed	Number of		r as % of
		Year	Year	Avg	na cor onca	Data Sites	Last Yr	Average
HUNTINGTON NORTH	4.2	3.5	3.8	2.3	PRICE RIVER	======================================	100	67
JOE'S VALLEY	61.6	42.5	44.7	43.6	SAN RAFAEL RIVER	3	100	72
KEN'S LAKE	2.3	0.7	1.4		MUDDY CREEK	1	68	46
MILL SITE	16.7	10.3	13.8	3.5	FREMONT RIVER	3	51	50
SCOFIELD	65.8	40.9	43.0	31.3	LASAL MOUNTAINS	1	155	90
				1	BLUE MOUNTAINS	1	95	58
					WILLOW CREEK	1	37	31
					CARBON, EMERY, WAYNE,	GRA 13	87	64

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

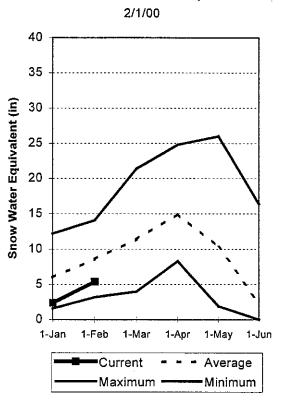
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

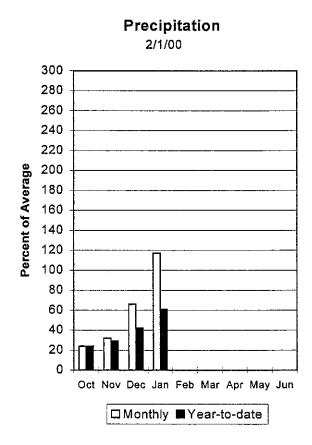
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

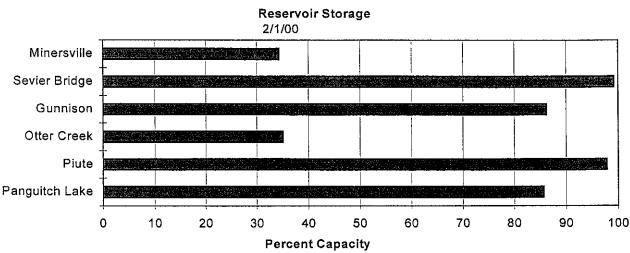
#### Sevier and Beaver River Basins Feb 1, 2000

Snowpacks on the Sevier River Basin are much below normal at 65% of average, just 83% of last year, but up 24% relative to last month. There is just a 13% chance of reaching average conditions by April. Individual sites range from 7% to 135% of average. Precipitation during Jan was above average at 117% of normal, bringing the seasonal accumulation (Oct-Jan) to 61% of average. Reservoir storage is in excellent condition at 89% of capacity. General snowmelt water supply conditions are exceptionally poor. Those on direct streamflow should prepare for a marginal year. Otter Creek and Minersville Reservoirs have been under repair but will both store water this year.

#### **Mountain Snowpack**







## SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - February 1, 2000

=======================================			======== : Drier ====	======================================	nditions s	======= Wette	======== r	======================================
Forecast Point	Forecast		=========			₩€€[6		
=======================================	Period	90% (1000AF)	70% (1000AF)	50% (Most		30% (1000AF)	10%	30-Yr Avg. (1000AF)
SEVIER R at Hatch	APR-JUL	10.3	13.6	24	44	34	53	54
SEVIER R nr Circleville	APR-JUL	3.0	23	37	49	51	71	75
SEVIER R nr Kingston	APR-JUL	2.5	27	41	49	55	79	83
ANTIMONY CK or Antimony	APR-JUL	0.67	1.88	2.90	39	3.92	5.92	7.40
E F SEVIER R or Kingston	APR-JUL	2.1	2.7	12.6	42	23	39	30
SEVIER R blw Piute Dam	APR-JUL	15.0	26	52	45	78	116	115
CLEAR CK nr Sevier	APR-JUL	1.0	3.8	8.6	41	13.4	21	21
SALINA CK at Salina	APR-JUL	0.5	2.3	11.4	65	21	37	17.6
PLEASANT CK nr Pleasant	APR-JUL	2.72	4.57	5.60	66	6.63	8.50	8.50
EPHRAIM CK nr Ephraim	APR-JUL	1.3	4.9	6.9	55	8.9	12.6	12.6
SEVIER R nr Gunnison	APR-JUL	41	46	120	50	194	339	239
CHICKEN CK nr Levan	APR-JUL	0.80	1.38	2.00	43	2.90	5.01	4.70
OAK CK nr Oak City (Acre Feet)	APR-JUL	427	611	780	44	996	1426	1777
BEAVER R nr Beaver	APR-JUL	8.0	9.7	11.0	42	12.5	15.2	26
MINERSVILLE RESERVOIR Inflow	APR-JUL	3.1	5.1	7.0	42	9.7	15.7	16.7

Reservoir Storage (10	00 AF) - End	of Janua	ry .		Watershed Snowpack	Analysis -	February '	1, 2000
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge *** Avg	Watershed D	Number of Data Sites	This Year	r as % of Average
GUNNISON MINERSVILLE (RkyFd) OTTER CREEK	20.3 23.3 52.5	17.5 8.0 18.4	18.4 24.7 49.6	11.7 11.2 27.5	UPPER SEVIER RIVER (sout EAST FORK SEVIER RIVER SOUTH FORK SEVIER RIVER	:h 8 3 5	59 43 69	48 41 51
PIUTE SEVIER BRIDGE PANGUITCH LAKE	71.8 236.0 22.3	70.2 234.1 19.1	57.2 224.8 20.4	36.9 101.1	LOWER SEVIER RIVER (incl BEAVER RIVER SEVIER & BEAVER RIVER BA	2	114 75 83	83 66 65

SEVIER & BEAVER RIVER BASINS

The average is computed for the 1961-1990 base period.

SEVIER & BEAVER RIVER BASINS

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

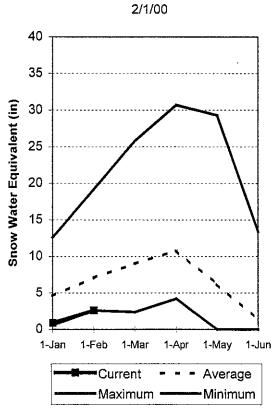
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

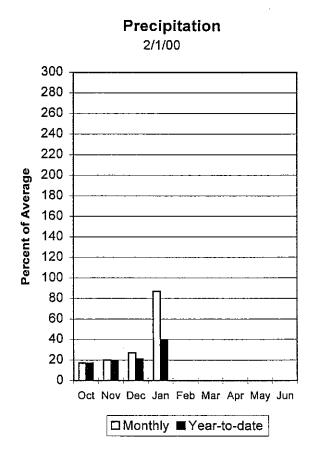
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

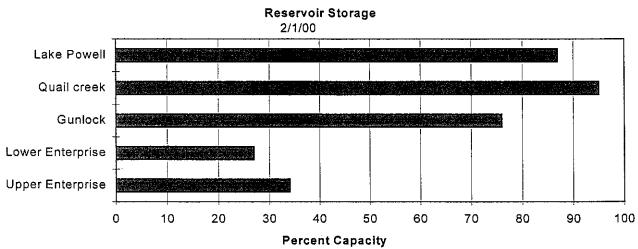
## E. Garfield, Kane, Washington, & Iron co. Feb 1, 2000

Snowpacks in this region are much below normal at 37% of average, about 57% of last year, but up 11% relative to last month. This ties the record low snowpack for Feb. Individual sites range from 12% to 57% of average. Extremely dry fall weather has depleted soil moisture which may have an adverse affect on springtime runoff. Precipitation was below normal during Jan at 87% of average, bringing the seasonal accumulation (Oct-Jan) to 39% of normal. Reservoir storage is in excellent shape at 79% of capacity. General water supply conditions are much below average. Water users on direct streamflow should prepare for a poor runoff season.

#### Mountain Snowpack







E. GARFIELD, KANE, WASHINGTON, & IRON Co.

==		Streamflow	v Forecasts	· February 1	, 2000			
F Beint						====== Wetter		:3======= , ,
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lake Powell inflow Virgin River nr Virgin Virgin River nr Hurricane	APR-JUL APR-JUL APR-JUL	1723 9.9 7.2	3555 16.5 14.6	4800 23 20	62 35 28	6045 31 29	7877 60 70	7735 66 72
Santa Clara River nr Pine Valley Coal Creek nr Cedar City	APR-JUL APR-JUL	0.48 3.2	0.93 5.8	1.80 8.0	34 43	2.95 10.6	6.04 19.9	5.30 18.8

	KANE, WASHINGTON, e (1000 AF) - End				E. GARFIELD, KANE, Watershed Snowpack			
Reservoir	Usable Capacity		able Stora Last Year	age *** Avg	Watershed [	Number of Data Sites		r as % of  Average
GUNLOCK LAKE POWELL QUAIL CREEK UPPER ENTERPRISE LOWER ENTERPRISE	10.4 24322.0 40.0 10.0 2.6	7.9 21137.0 38.0 3.4 0.7	10.2 21344.0 35.0 7.7 0.6		VIRGIN RIVER PAROWAN ENTERPRISE TO NEW HARMON COAL CREEK ESCALANTE RIVER E. GARFIELD, KANE, WASHIN	2 2	63 58 121 65 35 57	38 47 29 42 39 37

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

SNOW COURSE DATA FOR THE STATE OF UTAH AS OF FEBRUARY 2000

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
							DRY FORK SNOTEL	7160	2/01	ı	7.6	8.1	10.5
AGUA CANYON SNOTEL	8900	2/01	ı	0.4	4.4	5.5	EAST WILLOW CREEK SN	8250	2/01	ı	1.3	3.5	4.2
ALTA CENTRAL	8800				19.4	24.6	FARMINGTON CN SNOTEL	8000	2/01	ı	17.0	17.5	17.4
BEAVER DAMS SNOTEL	8000	2/01	1	3.7	4.1	7.8	FARMINGTON CANYON L.	6950				i	ı
BEAVER DIVIDE SNOTE	8280	2/01	ı	6.5	6.4	7.6	FARNSWORTH LK SNOTEL	0096	2/01	ı	8.4	10.5	11.4
BEN LOMOND PK SNOTL	8000	2/01	ı	12.8	17.2	24.2	FISH LAKE	8700				ı	1
BEN LOMOND TR SNOTL	0009	2/01	ı	9.9	10.3	14.9	FIVE POINTS LAKE SNO	10920	2/01	1	0.6	8.5	10.3
BEVAN'S CABIN	6450	•			•	1	FRANCES FLATS	0029				12.8	13.1
BIG FLAT SNOTEL	10290	2/01	1	9.9	9.4	10.7	G.B.R.C. HEADQUARTER	8700				•	1
BIRCH CROSSING	8100				ı	1	G.B.R.C. MEADOWS	10000				1	1
BLACK FLAT-U.M. CK S	9400	2/01	ı	4.3	4.3	6.0	GARDEN CITY SUMMIT	2600				1	ı
BLACK'S FORK GS-EF	9340				ı	ı	GEORGE CREEK	8840				1	ı
BLACK'S FORK JUNCIN	8930				ı	1	GOOSEBERRY R.S.	8400				1	ı
BOX CREEK SNOTEL	9800	2/01	1	5.7	7.5	7.6	GOOSEBERRY R.S. SNOT	7900	2/01	ı	4.8	3.8	6.0
BRIAN HEAD	10000				ı	1	HARDSCRABBLE SNOTEL	7250	2/01	1	8.1	8.7	13.3
BRIGHTON SNOTEL	8750	2/01	ı	9.6	11.7	14.2	HARRIS FLAT SNOTEL	7700	2/01	1	9.0	1.7	5,2
BRIGHTON CABIN	8700				15.2	17.2	HAYDEN FORK SNOTEL	9100	2/01	ı	0.6	8.4	10.2
BROWN DUCK SNOTEL	10600	2/01	1	6.3	10.9	11.8	HENRY'S FORK	10000				ı	ı
BRYCE CANYON	8000				0.0	3,2	HEWINTA SNOTEL	9500	2/01	1	9.9	5.8	6.2
BUCK FLAT SNOTEL	0086	2/01	1	8.2	8.6	10.3	HICKERSON PARK SNOTE	9100	2/01	1	3.0	9.6	3.5
BUCK PASTURE	9700				ı	1	HIDDEN SPRINGS	5500				4.4	6.0
BUCKBOARD FLAT	0006				1	1	HOBBLE CREEK SUMMIT	7420				ı	ı
BUG LAKE SNOTEL	7950	2/01	ı	7.2	11.1	12.9	HOLE-IN-ROCK SNOTEL	9150	2/01	1	3.7	4.3	3.2
BURT'S-MILLER RANCH	1900				ι	1	HORSE RIDGE SNOTEL	8260	2/01	ı	11.3	13.0	15.5
CAMP JACKSON SNOTEL	8600	2/01	1	4.2	4.4	7.2	HUNTINGTON-HORSESHOE	9800				ı	ı
CASTLE VALLEY SNOTL	9580	2/01	ı	4.5	8.9	7.6	INDIAN CANYON SNOTEL	9100	2/01	ţ	4.0	5.5	6.1
CHALK CK #1 SNOTEL	9100	2/01	ı	11.9	11.7	14.1	JOHNSON VALLEY	8850				ı	1
CHALK CK #2 SNOTEL	8200	2/01	ı	8.3	9.1	9.1	KILFOIL CREEK	7300				1	9.1
CHALK CREEK #3	7500				1	1	KILLYON CANYON	6300				6.4	12.9
CHEPETA SNOTEL	10300	2/01	1	2.5	0	8.1	KIMBERLY MINE SNOTEL	9300	2/01	ļ	8.3	8.7	8.2
CITY CREEK	7500				14.6	18.6	KING'S CABIN SNOTEL	8730	2/01	ı	2.3	5.6	7.3
CLEAR CK RIDG #1 SNT	9200	2/01	1	8.0	7.8	12.1	KLONDIKE NARROWS	7400				I	ı
CLEAR CK RIDG #2 SNT	8000	2/01	1	4.8	5.0	8.7	KOLOB SNOTEL	9250	2/01	ł	5.7	9.1	11.9
CORRAL	8200				ı	1		10100	2/01	1	4.7	7.2	7.2
CURRANT CREEK SNOTEL	8000	2/01	ı	3.5	4.4	6.8	63	10900	2/01	•	6.8	11.7	13.4
DANIELS-STRAWBERRY S	8000	2/01	t	7.8	8.4	11.4	LAKEFORK MOUNTAIN #3	8400				1	I
DESERET PEAK (d)	9250				ı	ı	LAMBS CANYON	7400				10.8	10.9
DESERET PEAK AM (d)	9250				1	ı	LASAL MOUNTAIN LOWER	8800				1	i
DESERRT PEAK SNO (d)	9250				6.8	10,9	LASAL MOUNTAIN SNOTE	9850	2/01	ı	7.6	4.9	8.4
DILL'S CAMP SNOTEL	9200	2/01	ı	4.1	6.0	8.9	LILY LAKE SNOTEL	9020	2/01	ı	6.4	8.0	8.1
DONKEY RESERVOIR SNO	0086	2/01	1	2.6	0.9	5.0	LITTLE BEAR LOWER	0009				1	ı
DRY BREAD POND SNOTL	8350	2/01	ı	7.8	8	12.5							
							-						

SNOW COURSE	ELEV.	DATE	SNOW	WATER CONTENT	LAST YEAR	AVERAGE 1961-90	SNOW COURSE	ELEV.	DATE	SNOW	WATER CONTENT		AVERAGE 1961-90
LITTLE GRASSY SNOTEL	6100	2/01	1 1	0.8	1.2	2.3	UPPER JOES VALLEY	8900	7/07	I		o ,	
LONG FLAT SNOTEL	8000	2/01	ı	1.5	0.7	5.6	VERNON CREEK SNOTEL	7500	2/01	1	2.1	5.1	6.8
LONG VALLEY JCT. SNT	7500	2/01	1	0.5	0.4	3.2	VIPONT	1670				1	ı
LOOKOUT PEAK SNOTEL	8200	2/01		12.7	13.6	19.5	WEBSTER FLAT SNOTEL WHITE RIVER #1 SNOTE	9200	2/01	1 1	4. 4	44 R	10.1
LOUIS MEADOW SNOTEL	6700	2/01	,	10.3	1	,	WHITE RIVER #3	7400	10/1		•	; ·	; ;
MAMMOTH-COTTONWD SNT	8800	2/01	ı	9.2	9.1	11.8	WIDTSOE #3 SNOTEL	9500	2/01		1.9	6.9	9.6
MERCHANT VALLEY SNOT	8750	2/01	1	5.1	6.3	7.0	WRIGLEY CREEK	0006				1	, ,
MIDDLE CANYON	7000				ı	ı	YANKEE RESERVOIR	8700					1
MIDWAY VALLEY SNOTEL	0086	2/01	ı	5.7	10.7	13.9							
	6950				12.9	13.4	•						
	8960	2/01	ı	13.2	13.5	14.8							
MILL-D SOUTH FORK	7400	2/01	ı	,	11.5 7.5	10.2							
MONTE CRISTO SNOTEL	0968	2/01	ı	11,1	14.8	17.3							
MOSBY MTN. SNOTEL	9500	2/01	ı	3.4	7.0	5.9							
MT.BALDY R.S.	9500				•	ı							
MUD CREEK #2	8600				1	ı							
OAK CREEK	1760				ı	7.9							
PANGUITCH LAKE R.S.	8200				ı	ı							
PARLEY'S CANYON SUM.	7500	,		ţ	11.9	12.0							
PARLEY'S CANYON SNOT	7500	2/01	ı	9.7		12.1							
PARRISH CREEK SNOTEL	7740	2/01	1	12.9	. (	, ,							
PAYSON R.S. SNOTEL	8050	2/01	ı		n (	11.3							
PICKLE KEG SNOTEL	0096	2/01	ı	7.6	6.9	10.0							
PINE CREEK SNOTEL	8800	2/01	ı	14.0	0.0	10.4							
RED PINE RIDGE SNOTE	9200	2/01	ı	7.4	6.7	20.0							
REDDEN MINE LOWER	8500					11.5							
REES'S FLAT	7300	20,0			١,								
BOCK CREEK SNOTEL	0067	2/07 2/04	1 1	. t.	7.4.0	 							
	1000	2/07		0.19	2 9	7.6							
_	8730	1 )		1	14.6	15.6							
SMITH MOREHOUSE SNIL	7600	2/01	1	7.5	7.2	8.7							
SNOWBIRD SNOTEL	9700	2/01	ı	16.5	15.0	22.0							
SPIRIT LAKE	10300				1	1							
SQUAM SPRINGS	9300				ı	t							
R PARK SNO	10100	2/01	1	8.2	8.1	8.6							
STILLWATER CAMP	8550	.0,0		·	1 6	, ;							
STRAWBERRY DIVIDE SN	200	7/ OT		1.1	ñ.,	D.T.							
SUSC KANCH	8200				1	1							
TALL FOLES	9200	2/01	ı	ď	11.6	12.2							
	8500	: :			1	<u> </u>				٠			
TIMBERLINE	9100				ı	ı							
	8140	2/01	1	9.0	11.6	15.1							
TONY GROVE LA SNOTEL TONY GROVE R.S.	8400 6250	7 / O T	I	70.01	C + 7	0:77							
TRIAL LAKE	0966				1	15.4							
TRIAL LAKE SNOTEL	0966	2/01	ı	12.8	10.7	15.8							

UTAH SURFACE	WATER	SUPPLY	INDEX	
Snow Surveys	NRCS	USDA		
Basin or Region	SWSI/%	Percentile	Years with	Agricultural Water
			Similar SWSI	Shortage May Occur
				If SWSI Less Than
Bear River	-0.8	41%	79,87,98,99	-3.8
Ogden River	-2.6	19%	81,90,91,94	
Weber River	-1.9	27%	94,89,79,81	
Tooele Valley	NA -			
Provo	-0.3	46%	78,88,79,81	
North Slope	NA			
West Uintah Basin	2.2	76%	87,86,97,99	
East Uintah Basin	-2.6	18%	96,94,92,88	
Price River	-0.5	44%	76,73,99,87	
San Rafael	-1.2	36%	91,76,88,99	
Moab	-1.5	21%	89,99,81,91	
Upper Sevier River	-2.1	25%	90,92,65,89	
Lower Sevier River	-0.5	42%	68,76,89,81	
Beaver River	-2.9	18%	77,61,63	
Virgin River	-1.7	29%	86,94,97,92	
Snow Surveys			SWSi Scale: -4 to 4	
245 N Jimmy Doolittl	e Rd		Percentile: 0 - 100%	
Salt Lake City, UT				
(801) 524-5213				

				٧
				•
			·	
		•		
				•

Issued by

Pearlie S. Reed Chief Natural Resources Conservation Service U.S. Department of Agriculture Released by

Phillip J. Nelson State Conservationist Natural Resources Conservation Service Salt Lake City, Utah

YOU MAY OBTAIN THIS PRODUCT BY VISITING OUR WEB SITE @: http://utsnow.nrcs.usda.gov

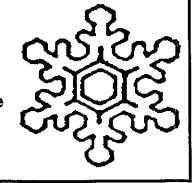


245 North Jimmy Doolittle Road Salt Lake City, UT 84116



# Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT





Natural Resources Conservation Service

# Utah Basin Outlook Report March 1, 2000



## Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Vane O. Campbell, Area Conservationist, 340 N. 600 E., Richfield, UT 84701 - Phone: (435) 896-6441
Todd C. Nielson, Area Conservationist, 302 E. 1860 S., Provo, UT 84606 - Phone: (801) 377-5580
David M. Webster, Area Conservationist, 240 W. HWY 40, 333-4, Roosevelt, UT 84006 - Phone: (435)722-4261

#### How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national original gender, religion, age, disability, political beliefs, sexual orientation and marital or family status. (Not all prohibited bases apply to all programs.)

Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326 W, Whitten Building, 14th and Independence Ave., SW, Washington, D.C., 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

#### STATE OF UTAH GENERAL OUTLOOK Mar 1, 2000

#### **SUMMARY**

Snowpacks have made phenomenal gains, the equivalent of a home run, across the State of Utah this past month, particularly in the south. In northern Utah, snowpacks generally increased 15% to 20% of average relative to February and in southern Utah, increases ranged from 22% in the southeast to 51% over the Virgin River area. The Virgin Basin received 2.8 times the average February snowpack increase. Low elevation snowpacks are below normal in some areas due to warm temperatures. In general, snowpacks are now about 80% to 90% of average across the state. Even with this huge increase in snow, some areas will still need double a normal March snowpack accumulation to reach average by April 1, not a likely scenario. The good news is that coming from 30% of normal snowpack up to the 80% to 90% range will give Utah a huge reprieve in terms of water management this coming summer and certainly eases fears of drought like conditions. Given average March accumulation, snowpacks will be very close to present percentages (80%-90%) by April. A worst case March scenario, (highly unlikely) would put most areas in the 50% to 70% range. February precipitation across the state was above to much above normal at 155%, a little less in the north (130% on the Bear) than in the south (170% on the Virgin). This brings the seasonal total (Oct-Feb) to 82% of normal statewide, up 20% relative to last month. An unusually dry fall has severely depleted soil moisture, which, in turn, could adversely affect spring snowmelt runoff. A much higher than normal amount of snowmelt could be infiltrated to the soil, leaving less for streamflow. Reservoir storage is generally in excellent condition at 85% of capacity. Most operators are following a conservative strategy in anticipation of a marginal runoff year. Streamflow forecasts call for near to below normal April-July runoff statewide.

#### **SNOWPACK**

March first snowpacks in Utah, as measured by the NRCS SNOTEL system, are near to below average statewide. In northern Utah, snowpacks are 80% to 90% of normal over the Bear, Weber, Provo and Duchesne Rivers. These areas will need 130% to 200% of average March snowpack increase to reach 100% by April and there is about a 5% to 20% chance of that happening. In southern Utah, snowpacks are 85% to 90% of normal and need 130% to 160% of average March snowpack increase to reach 100% of normal by April. There is actually a pretty good chance of that happening in southern Utah (10% to 40%).

#### **PRECIPITATION**

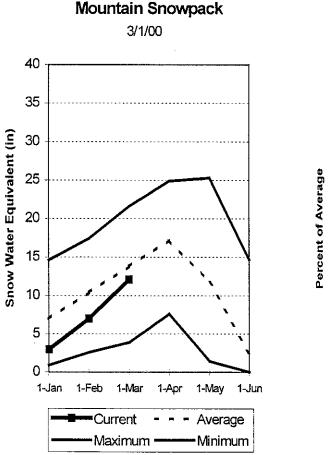
Mountain precipitation during February was much above average statewide, at 155% of normal. This brings the seasonal accumulation (Oct-Feb) up to 82% of average statewide. The seasonal accumulation was just 62% of normal on Feb 1 and only 39% on January 1.

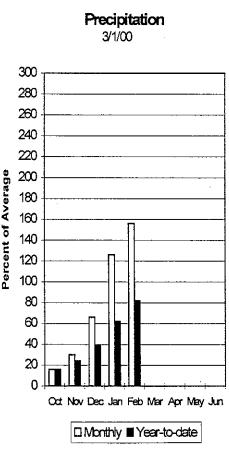
#### RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 85% of capacity. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible in anticipation of a poor runoff season. Both Minersville and Otter Creek Reservoirs, which have undergone recent repairs, are currently storing water.

#### **STREAMFLOW**

Snowmelt streamflows are expected to be near to below average across the entire state of Utah this year. Streamflows will most likely have lower peaks and low volumes this runoff season. With only one month remaining in the snow accumulation season, it appears that Utah won't have an over abundance of water, but has managed to avoid a potential drought condition.





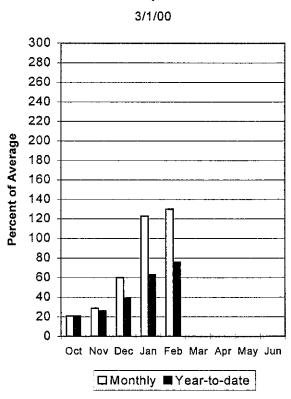
#### Bear River Basin Mar 1, 2000

Snowpacks on the Bear River Basin are below average at 83% of normal, about 79% of last year and up 12% relative to last month. Specific sites range from 69% to 126% of normal. Fall weather was extremely dry depleting soil moisture, which may have an adverse affect on spring runoff. January precipitation was above normal at 130%, which brings the seasonal accumulation (Oct-Feb) to 76% of average. Reservoir storage is at 79% capacity. In general, spring runoff conditions are below average, but have steadily improved since January.

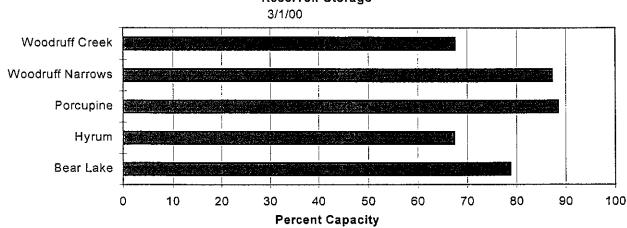
#### Mountain Snowpack

## 3/1/00 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 1-Feb 1-Mar 1-May Current Average Maximum Minimum

#### Precipitation



#### Reservoir Storage



#### BEAR RIVER BASIN

#### Streamflow Forecasts - March 1, 2000

=======================================	========			== <b>===</b> =======		=========	========	
		<<=====	Drier ====	== Future Co	onditions ==	===== Wetter	, ====>>	
Forecast Point	Forecast	2222402		= Chance Of 8	Exceeding * =			
	Period	90% (1000AF)	70% (1000AF)		Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear R nr UT-WY State Line	APR-JUL	69	82	92	80	104	123	115
BEAR R nr Woodruff, UT	APR-JUL	62	87	110	74	138	194	149
BIG CK nr Randolph	APR-JUL	0.04	1.54	3.00	79	4.46	6.62	3.80
BEAR R nr Randolph, UT	APR-JUL	17.0	58	86	73	114	155	118
SMITHS FK nr Border, WY	APR-JUL	60	74	85	83	98	121	102
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	12.6	17.6	22	67	28	38	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	96	158	200	69	242	304	288
MONTPELIER CK nr Montpelier (Disc)(2	APR-JUL	5.4	6.8	8.0	66	9.4	11.9	12.2
CUB R nr Preston	APR-JUL	25	32	36	77	41	47	47
L BEAR R at Paradise, UT	APR-JUL	19.2	25	29	65	34	44	45
LOGAN R nr Logan	APR-JUL	66	80	90	84	102	122	107
BLACKSMITH Fk nr Hyrum	APR-JUL	27	34	39	72	45	56	54
BEAR RIV	ER BASIN		=======================================	=======================================	:=====================================	BEAR RIVER BA	:======: .SIN	

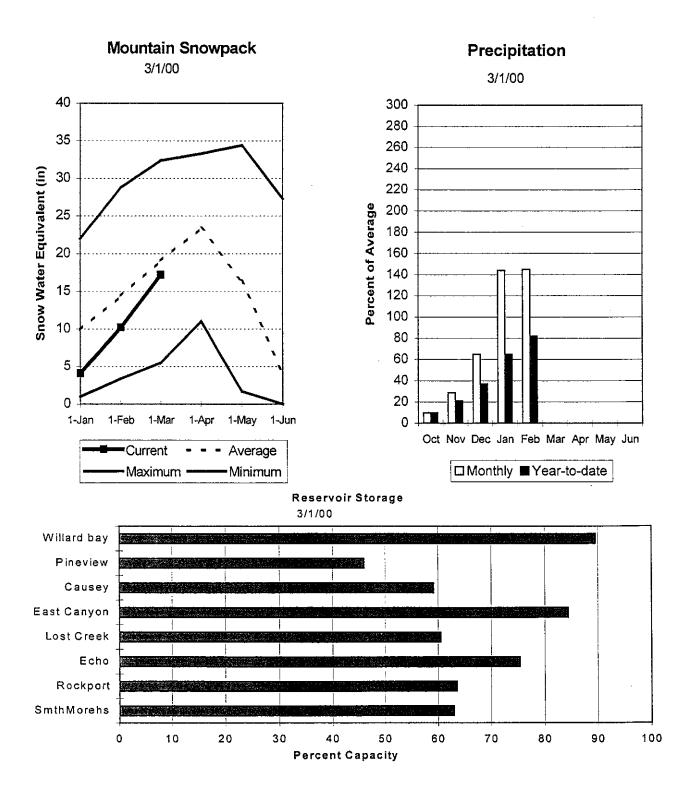
Reservoir Stor	BEAR RIVER BASIN age (1000 AF) - End	of Febr	uary		BEAR i Watershed Snowpac	RIVER BASIN < Analysis -	March 1,	2000
Reservoir	Usable Capacity		able Stora Last Year	ge *** Avg	Watershed	Number of Data Sites	This Yea	r as % of
BEAR LAKE HYRUM PORCUPINE WOODRUFF NARROWS WOODRUFF CREEK	1421.0 15.3 11.3 57.3 4.0	1119.6 10.3 10.0 50.0 2.7	1123.0 12.3 0.0 46.5 4.0	985.0 10.8 3.7	BEAR RIVER, UPPER (abv BEAR RIVER, LOWER (blw LOGAN RIVER RAFT RIVER BEAR RIVER BASIN		84 76 72 105 79	85 82 83 128 83

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.(2) - The value is natural flow - actual flow may be affected by upstream water management.

#### Weber and Ogden River Basins Mar 1, 2000

Snowpack on the Weber and Ogden Watersheds is at 90% of average, about the same as last year and up 19% relative to last month. Individual sites range from 74% to near 128% of average. About 147% of normal March snowpack increase is required to reach average by April 1. Dry fall weather depleted soil moisture which could have an adverse impact on spring runoff. Precipitation during Feb was much above normal at 145% of average, bringing the seasonal accumulation (Oct-Feb) to 82% of average. Reservoir storage on the Weber system is at 74% of capacity. Spring runoff conditions are near average.



#### WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - March 1, 2000

**=====================================		========	=========	=======================================	========			
·		<b>&lt;&lt;====</b>	Drier ====	== Future C	onditions =	===== Wetter	====>>	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)		Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	12.7	18.2	22	73	26	31	30
WEBER R nr Oakley	APR-JUL	69	88	100	82	112	131	122
ROCKPORT RESERVOIR inflow	APR-JUL	68	93	110	82	127	152	134
CHALK CK at Coalville, Ut	APR - JUL	15.3	28	37	84	46	59	44
WEBER R nr Coalville, Ut	APR - JUL	67	94	112	82	130	157	136
ECHO RESERVOIR Inflow	APR - JUL	69	111	140	80	169	211	176
LOST CK Res Inflow	APR-JUL	3.7	9.8	14.0	81	18.2	24	17.2
E CANYON CK nr Morgan	APR-JUL	11.3	19.5	25	83	31	39	30
WEBER R at Gateway	APR-JUL	206	247	275	79	303	344	347
S FORK OGDEN R nr Huntsville	APR-JUL	29	40	48	76	56	67	63
PINEVIEW RESERVOIR Inflow	APR-JUL	48	78	98	79	118	148	124
WHEELER CK nr Huntsville	APR-JUL	2.93	4.04	4.80	77	5.56	6.67	6.20

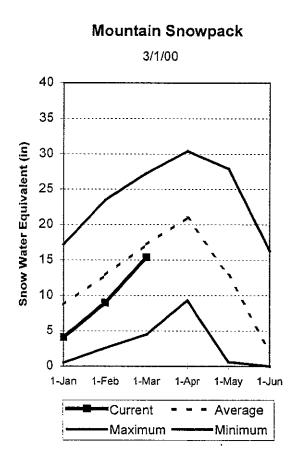
WEBER & OGDEN Reservoir Storage (1	WATERSHEDS in 000 AF) - End		ary		WEBER & OGDEN Watershed Snowpack		2000	
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge *** Avg	Watershed	Number of Data Sites		r as % of
CAUSEY EAST CANYON ECHO LOST CREEK PINEVIEW ROCKPORT WILLARD BAY	7.1 49.5 73.9 22.5 110.1 60.9 215.0	4.2 41.8 55.7 13.6 50.6 38.7 194.6	3.1 40.2 59.1 1.8 86.2 37.7 188.4	2.3 27.7 49.5 13.4 48.7 30.2 116.4	OGDEN RIVER WEBER RIVER WEBER & OGDEN WATERSHED	4 9 S 13	91 99 96	83( 94( 90

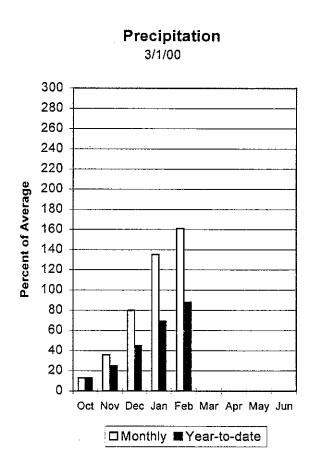
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

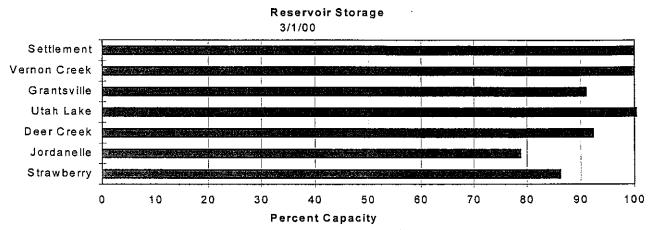
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) - The value is natural flow - actual flow may be affected by upstream water management.

#### Utah Lake, Jordan River & Tooele Valley Basins Mar 1, 2000

Snowpacks over these watersheds are at 89% of average, about 111% of last year, up 18% relative to last month. Individual sites range from 64% to 114% of average. About 150% of the normal March snowpack increase will produce an average April 1 snowpack. Fall weather was extremely dry depleting soil moisture, which could have an adverse affect on spring runoff. Precipitation during Feb was much above normal at 161%, bringing the seasonal accumulation (Oct-Feb) to 88% of average. Reservoir storage is at 91% of capacity. Spring runoff conditions are a little below normal but steadily improving.







### THE LANGE FOR THE STATE OF THE

#### UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - March 1, 2000

		<<=====	: Drier ====	=== Future Co	nditions =:	====== Wetter	, ====>> :=========	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	= Chance Of E 50% (Most (1000AF)	-	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
PAYSON CK or Payson	APR-JUL	0.40	1.89	3.00	68	4.11	6.29	4.40
SPANISH FORK or Castilla	APR-JUL	10.4	28	51	69	75	114	74
HOBBLE CK or Springville	APR-JUL	5.1	10.3	12.8	68	15.3	21	18.8
PROVO R nr Hailstone	APR-JUL	43	66	80	73	94	118	109
PROVO R below Deer Creek Dam	APR-JUL	31	67	89	70	111	147	128
AMERICAN FORK nr American Fk.	APR-JUL	13.4	18.1	21	66	24	29	32
UTAH LAKE inflow	APR-JUL	36	149	220	68	291	405	324
L COTTONWOOD CRK nr SLC	APR-JUL	23	30	34	87	38	45	. 39
BIG COTTONWOOD CRK nr SLC	APR-JUL	22	29	33	87	37	44	. 38
PARLEY'S CK nr SLC	APR-JUL	2.2	8.3	12.0	76	15.7	22	15.9
MILL CK nr SLC	APR-JUL	1.88	3.82	5.00	77	6.18	8.13	6.50
DELL FK nr SLC	APR-JUL	1.63	4.16	5.60	79	7.04	9.59	7.10
EMIGRATION CK nr SLC	APR-JUL	0.80	1.82	3.20	76	4.58	6.80	4.20
CITY CK nr SLC	APR-JUL	1.83	4.55	6.20	75	7.85	10.54	8.30
VERNON CK nr Vernon (Acre Feet)	APR-JUL	549	784	1000	75	1275	1822	1340
SETTLEMENT CK nr Tooele (Acre Feet)	APR-JUL	578	1099	1700	74	2629	4996	2300
S WILLOW CK nr Grantsville	APR-JUL	0.06	1.39	2.30	74	3.21	4.54	3.10

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Reservoir Storage (1000 AF) - End of February UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Watershed Snowpack Analysis - March 1, 2000

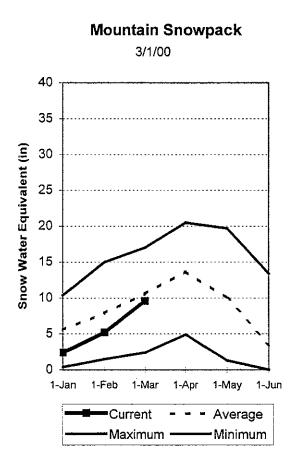
Reservoir	Usable Capacity	*** Usa This	ble Stora Last	ge ***	Watershed	Number of		r as % of
	<u>'</u>	Year	Year	A∨g		Data Sites	Last Yr	Average
DEER CREEK	149.7	138.0	124.5	95.5	PROVO RIVER & UTAH LAKE	7	102	82
GRANTSVILLE SETTLEMENT CREEK	3.3 1.0	2.3 1.0	3.3 1.0	0.7	PROVO RIVER JORDAN RIVER & GREAT SA	4 LT 6	102 111	87 91
STRAWBERRY-ENLARGED UTAH LAKE	1105. <i>9</i> 870. <i>9</i>	953.0 893.2	989.5 923.8	689.4	TOOELE VALLEY WATERSHED UTAH LAKE, JORDAN RIVER		136 111	100 89
VERNON CREEK	0.6	0.6	0.6	0.5	,			

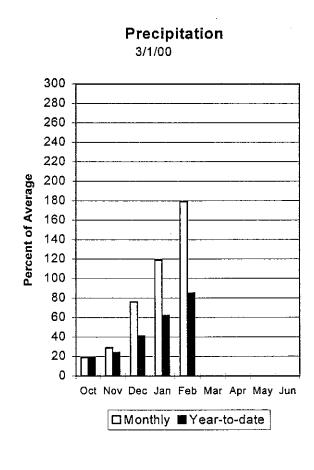
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

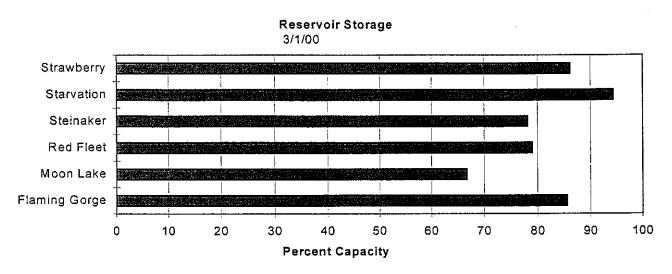
- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

#### Uintah Basin and Dagget SCD's Mar 1, 2000

Snowpacks across the Uintah Basin and North Slope areas are near average at 93%, about the same as last year, and up 23% relative to last month. The North Slope ranges from 82% to 113% and the Uintah Basin ranges from 60% to 116% of average. Extremely dry fall weather has depleted soil moisture, which may adversely affect spring runoff. Precipitation during Feb was much above normal at 179%, bringing the seasonal accumulation (Oct-Feb) to 85% of average. Reservoir storage is excellent at 88% of capacity. Springtime runoff conditions are near to slightly below normal.







## UINTAH BASIN & DAGGET SCD'S

## Streamflow Forecasts - March 1, 2000

		   <<======	:======== : Drier ====	======================================	onditions =	======= Wetter	, ====>> .==========	:=====================================
Forecast Point	Forecast	=======		= Chance Of E			222222	
32555	Period	90% (1000AF)	70% (1000AF)	50% (Most (1000AF)	Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Blacks Fork nr Robertson	APR-JUL	52	69	80	84	91	108	95
EF of Smiths Fork nr Robertson	APR-JUL	18.2	22	24	80	27	32	30
Flaming Gorge Reservoir Inflow	APR-JUL	673	868	1000	84	1133	1328	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	8.8	13.1	16.0	81	18.9	23	19.8
Ashley Creek nr Vernal	APR-JUL	19.9	35	45	88	55	70	51
WF DUCHESNE RIVER or Hanna	APR-JUL	10.9	16.0	20	77	25	32	26
DUCHESNE R nr Tabiona	APR-JUL	54	69	80	76	91	106	105
UPPER STILLWATER RESV inflow	APR-JUL	46	57	65	80	73	84	81
ROCK CK nr Mountain Home	APR-JUL	54	66	75	80	84	96	94
DUCHESNE R abv Knight Diversion	APR-JUL	86	121	145	77	169	204	189
STRAWBERRY RES or Soldier Springs	APR-JUL	28	40	50	85	61	79	59
CURRANT CREEK RESV Inflow	APR-JUL	8.4	12.6	15.5	74	18.4	23	21
STARVATION RESERVOIR inflow	APR-JUL	61	84	100	86	116	139	117
MOON LAKE Inflow	APR-JUL	37	48	55	80	62	73	69
Yellowstone River nr Altonah	APR-JUL	31	46	56	86	66	82	65
DUCHESNE R at Myton	APR-JUL	70	136	180	68	224	290	263
UINTA R nr Neola	APR-JUL	33	55	70	82	85	107	85
Whiterocks River nr Whiterocks	APR-JUL	18.0	32	45	78	58	77	50
DUCHESNE R nr Randiett	APR-JUL	77	118	215,	66	312	455	-
UINTAH BASIN	& DAGGET S	======== CD ¹ S		======================================	UINT.	AH BASIN & DAG	GET SCD'S	12022536255554

	H BASIN & DAGGET S ge (1000 AF) - Enc		uary	1	UINTAH BASIN Watershed Snowpack						
Reservoir	Usable Capacity		able Stora Last Year	ige ***	Watershed D	Number of ata Sites		r as % of			
FLAMING GORGE MOON LAKE STEINAKER STEINAKER STARVATION STRAWBERRY-ENLARGED	3749.0 49.5 33.4 33.4 165.3 1105.9	3208.0 33.0 26.1 26.1 156.0 953.0	3265.3 33.8 31.3 31.3 134.6 989.5	30.5 21.1 21.1 112.1	UPPER GREEN RIVER IN UTA ASHLEY CREEK BLACK'S FORK RIVER SHEEP CREEK DUCHESNE RIVER LAKE FORK-YELLOWSTONE CR STRAWBERRY RIVER UINTAH-WHITEROCKS RIVERS UINTAH BASIN & DAGGET SO	2 2 1 11 E 4 4	93 109 87 83 93 84 110 83 95	94 88 92 98 89 89 88 93			

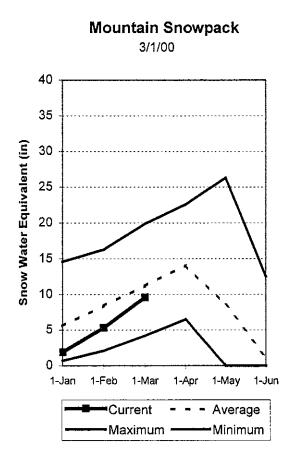
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

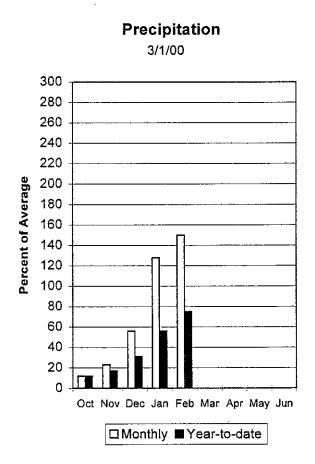
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

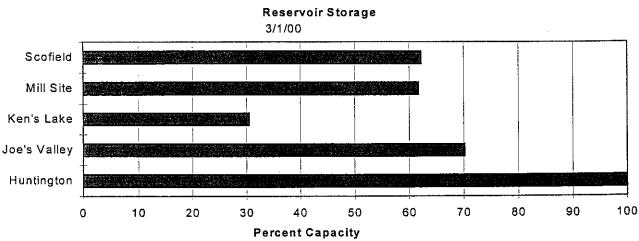
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

#### Carbon, Emery, Wayne, Grand and San Juan Co. Mar 1, 2000

Snowpacks in this region are at 86% of average, 118% of last year, and up 22% relative to last month. Individual sites range from 67% to 106% of average. Extremely dry fall weather has depleted soil moisture, which could have an adverse affect on spring runoff. Precipitation during Feb was much above average at 150%, bringing the seasonal accumulation (Oct-Feb) to 75% of normal. Reservoir storage is at 66% of capacity. Springtime runoff conditions are still slightly below normal but significantly improved since January. Individuals relying on direct streamflow could have a marginal runoff season.







#### 

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - March 1, 2000

		<b>&lt;&lt;====</b>	 Drier ====	== Future Co	onditions ==	===== Wette	=====>>	******
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Gooseberry Creek nr Scofield	APR-JUL	6.4	9.2	11.0	94	12.8	15.6	11.7
Scofield Reservoir inflow	APR-JUL	29	36	40	91	44	51	44
White River blw Tabbyune Creek	APR-JUL	6.2	9.9	13.0	70	16.5	22	18.7
Green River at Green River, UT	APR-JUL	1606	2257	2700	86	3143	3794	3151
Electric Lake inflow	APR-JUL	8.0	11.0	13.5	89	16.3	21	15.1
HUNTINGTON CK nr Huntington	APR-JUL	23	31	36	88	41	49	41
JOE'S VALLEY RESV Inflow	APR-JUL	15.4	30	40	76	50	65	53
Ferron Creek nr Ferron	APR-JUL	18.8	25	30	77	35	44	39
Colorado River nr Cisco	APR-JUL	1738	2668	3300	80	3932	4862	4132
Mill Creek at Sheley Tunnel nr Moab	APR-JUL	2.62	4.27	5.40	90	6.53	8.18	6.00
Indian Creek Tunnel nr Monticello	MAR-JUL	0.24	0.38	0.60	70	0.82	1.15	0.86
Indian Creek abv Cottonwood Creek	MAR-JUL	0.69	1.02	1.70	67	2.50	3.67	2.55
Seven Mile Creek nr Fish Lake	APR-JUL	1.47	4.17	6.00	92	7.83	10.53	6.50
Muddy Creek nr Emery	APR-JUL	5.1	11.6	16.0	82	20	27	19.6
North Ck ab R.S. nr Monticello	MAR-JUL	0.28	0.45	0.70	52	1.07	1.69	1.35
South Ck ab Lloyd's Res nr Monticell		0.28	0.43	0.70	53	1.03	1.64	1.31
Recapture Ck bl Johnson Ck nr Blandi		1.46	1.92	3.60	59	5.28	7.76	6.07
San Juan River nr Bluff		348	437	620	54	803	1072	1157

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Reservoir Storage (1000 AF) - End of February

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - March 1, 2000

Reservoir	Usable Capacity	*** Usa This	ble Storaç Last	ge ***	Watershed	Number of	This Year as % of				
=		Year	Year	A∨g		Data Sites	Last Yr	Average			
HUNTINGTON NORTH	4.2	4.2	4.1	3.0	PRICE RIVER	3	121	89			
JOE'S VALLEY	61.6	43.2	44.8	44.6	SAN RAFAEL RIVER	3	123	89			
KEN'S LAKE	2.3	0.9	1.5		MUDDY CREEK	1	100	67			
MILL SITE	16.7	9.8	13.6	4.0	FREMONT RIVER	3	95	83			
SCOFIELD	65.8	43.6	44.6	32.2	LASAL MOUNTAINS	1	178	98			
					BLUE MOUNTAINS	1	115	75			
					WILLOW CREEK	1	111	83			
				,	CARBON, EMERY, WAYNE, G	RA 13	118	86			

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

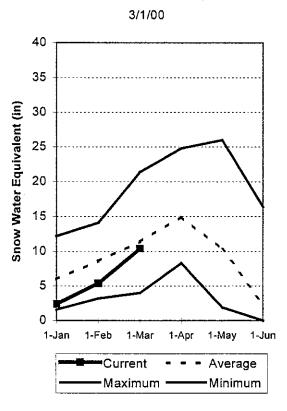
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

#### Sevier and Beaver River Basins Mar 1, 2000

Snowpacks on the Sevier River Basin are near normal at 94% of average, 122% of last year, and up a huge 29% relative to last month. Individual sites range from 45% to 136% of average. Extremely dry fall weather has depleted soil moisture, which may have an adverse impact on runoff. Precipitation during Feb was much above average at 160% of normal, bringing the seasonal accumulation (Oct-Feb) to 83% of average. Reservoir storage is in excellent condition at 90% of capacity. General snowmelt water supply conditions are much improved over last month. Otter Creek and Minersville Reservoirs have been under repair but are both storing water this year.

#### **Mountain Snowpack**



#### Precipitation 3/1/00 300 280 260 240 220 Percent of Average 200 180 160 140 120 100 80 60 40 20 Dec Jan Feb Mar Apr May Jun ☐ Monthly ■ Year-to-date

#### Reservoir Storage 3/1/00 Minersville Sevier Bridge Gunnison Otter Creek Piute Panguitch Lake 60 90 100 10 20 30 40 70 80 **Percent Capacity**

# SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - March 1, 2000

<<===== Drier ===== Future Conditions ====== Wetter =====>> Forecast Point Forecast ============= Chance Of Exceeding \* =================== Period 90% 70% 50% (Most Probable) 30% 10% 30-Yr Avg. (1000AF) (1000AF) (1000AF) (% AVG.) (1000AF) (1000AF) (1000AF) -------SEVIER R at Hatch APR-JUL 11.3 28 37 69 47 62 54 SEVIER R nr Circleville APR-JUL 15.0 36 49 65 63 83 75 SEVIER R nr Kingston APR-JUL 17.4 38 52 63 93 83 66 ANTIMONY CK nr Antimony APR-JUL 1.70 3.68 4.70 64 5.72 7.70 7.40 E F SEVIER R nr Kingston APR-JUL 6.6 11.7 70 21 30 45 30 SEVIER R blw Piute Dam APR-JUL 14.0 57 83 109 152 115 CLEAR CK nr Sevier APR-JUL 2.1 9.2 13.5 64 17.8 25 21 SALINA CK at Salina APR-JUL 17.6 3.0 4.4 13.0 74 37 22 PLEASANT CK nr Pleasant APR-JUL 4.08 5.92 6.80 80 7.68 9.27 8.50 EPHRAIM CK or Ephraim 7.2 APR-JUL 3.5 9.3 74 11.4 15.1 12.6 SEVIER R nr Gunnison APR-JUL 69 172 72 256 394 239 CHICKEN CK or Levan APR-JUL 3.80 1.74 2.77 81 5.21 8.30 4.70 OAK CK nr Oak City (Acre Feet) 1777 APR-JUL 877 1450 1182 82 1778 2398 BEAVER R nr Beaver APR-JUL 15.7 19.2 22 85 25 26

SEVIER & Reservoir Storage	BEAVER RIVER BAS (1000 AF) - End			SEVIER & BEAVER RIVER BASINS Watershed Snowpack Analysis - March 1, 2000								
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge ***   Avg	Watershed Da	Number of ata Sites	This Yea	;				
GUNNISON MINERSVILLE (Rkyfd) OTTER CREEK PIUTE SEVIER BRIDGE PANGUITCH LAKE	20.3 23.3 52.5 71.8 236.0 22.3	20.3 10.4 23.9 71.3 229.7 19.3	20.0 23.3 52.5 67.2 219.2 20.7	14.0 12.9 31.2 41.5 119.6	UPPER SEVIER RIVER (south EAST FORK SEVIER RIVER SOUTH FORK SEVIER RIVER LOWER SEVIER RIVER (inclu BEAVER RIVER SEVIER & BEAVER RIVER BASE	3 5 1 6 2	114 100 123 129 124 122	90 87 92 97 97 97				

11.2

======

14 0

84

\_\_\_\_\_\_

17 5

\_\_\_\_\_

24

=======

16 7

\_\_\_\_\_

The average is computed for the 1961-1990 base period.

MINERSVILLE RESERVOIR Inflow

------

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

8.1

=====

(2) - The value is natural flow - actual flow may be affected by upstream water management.

APR-JUL

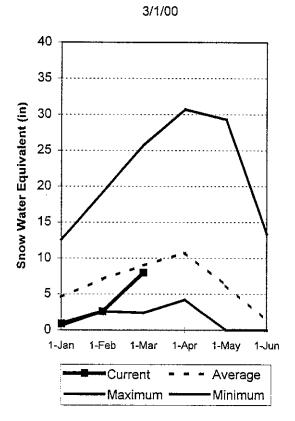
----------

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

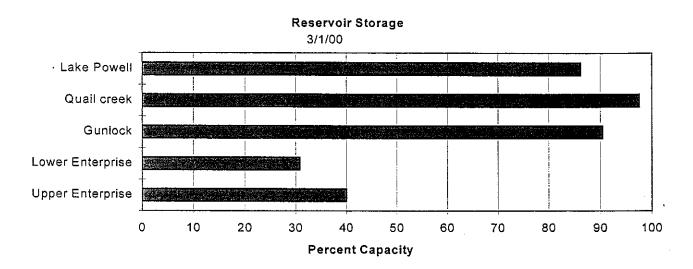
#### E. Garfield, Kane, Washington, & Iron co. Mar 1, 2000

Snowpacks in this region are slightly below normal at 88% of average, about 151% of last year, and up a phenomenal 51% relative to last month. From a record low snowpack to near normal in one month. Individual sites range from 70% to 145% of average. Extremely dry fall weather has depleted soil moisture which may have an adverse affect on springtime runoff. Precipitation was much above normal during Feb at 170% of average, bringing the seasonal accumulation (Oct-Feb) to 72% of normal. Reservoir storage is in excellent shape at 84% of capacity. General water supply conditions are significantly improved over last month and are just slightly below normal.

#### Mountain Snowpack



#### Precipitation 3/1/00 Percent of Average Oct Nov Dec Jan Feb Mar Apr May Jun ☐ Monthly ■ Year-to-date



E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - March 1, 2000

=======================================		========	<b>=====</b> ====	==========	==========	=========	=========	=======================================
		<<=====	Drier ====	== Future Co	onditions ==	===== Wetter	====>>	
Forecast Point	Forecast	=======	========	= Chance Of 8	Exceeding * =	:=======	======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
		========	========	220222222			========	=======================================
Lake Powell inflow	APR-JUL	3097	4826	6000	78	7174	8903	7735
Virgin River nr Virgin	APR-JUL	21	29	40	61	53	76	66
Virgin River nr Hurricane	APR-JUL	21	28	40	56	52	81	72 .
Santa Clara River nr Pine Valley	APR-JUL	1.31	2.39	3.50	66	4.82	7.36	5.30
Coal Creek nr Cedar City	APR-JUL	5.7	9.4	12.5	67	16.0	22	18.8
			========				========	

Reservoir Stora	KANE, WASHINGTON ige (1000 AF) - En	•			E. GARFIELD, KANE, Watershed Snowpack			
Reservoir	Usable Capacity		able Stora Last Year	age *** Avg	Watershed [	Number of Data Sites		r as % of ====== Average
GUNLOCK LAKE POWELL QUAIL CREEK UPPER ENTERPRISE LOWER ENTERPRISE	10.4 24322.0 40.0 10.0 2.6	9.4 20948.0 39.0 4.0 0.8	10.8 21088.0 37.5 7.7 0.7	0.8 0.6	VIRGIN RIVER PAROWAN ENTERPRISE TO NEW HARMON COAL CREEK ESCALANTE RIVER E_ GARFIELD, KANE, WASH)	2	147 100 0 130 83	86 86 118 85 80 88

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) The value is natural flow actual flow may be affected by upstream water management.

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

SNOW COURSE DATA FOR THE STATE OF UTAH As of March 2000

AVERAGE 1961-90	15.3	6.0	23.6	19.6	15.5	7.1	13.6	16.1	13.8	19.2	14.7	17.4	6. 6	7.8	17.1	5.7	13.7	11.2	8.5	5.0	6.4	12.7	4.5	19.9	19.9	6.8	6.1	12.1	1	11.6	6.0	17.0	16.7	9.5	18.0	5.8	14.3	7.6	10.9	10.6	4.6
LAST YEAR	11.1	4.5	24.0	17.6	13.1	4.5	14.4	15.7	6.6	14.8	13.7	15.2	8.4	5.5	13.2	1.8	13.5	10.9	6.6	5.9	4.2	10.7	6.0	20.2	13.5	7.2	3.5	12.2	6.3	11.3	7.0	20.4	11.6	11.3	16.9	5.0	15.0	3.4	0.9	11.6	11.9
WATER	14.6	5.0	30.2	22.1	12.2	5.3	14.3	18.5	13.6	18.8	10.1	16.6	8.7	7.5	14.9	5.3	12.5	7.0	9.1	4.9	2.8	11.5	5.1	17.7	18.2	9.7	5.2	10.6	5.9	12.9	7.6	16.7	14.6	9.5	13,6	6.7	14.5	7.4	10.7	8.3	7.5
SNOW	ı	•	1	71	1	20	ı	58	21	99	37	69	34	ı	ı	ı	42	32	ı	ı	6	44	1	ı	23	1	22	39	22	ı	1	53	ı	ı	1	31	51.	27	1	ı	23
DATE	3/01	3/01	3/01	2/29	3/01	2/26	3/01	2/29	2/26	2/26	2/29	2/26	2/26	3/01	3/01	3/01	3/01	2/27	3/01	3/01	2/29	2/26	3/01	3/01	2/26	3/01	2/26	2/29	2/28	3/01	3/01	2/29	3/01	3/01	3/01	2/26	3/01	2/28	3/01	3/01	2/28
ELEV.	7160	8250	8000	6950	0096	8700	10920	6700	8700	10000	7600	8840	8400	7900	7250	7700	9100	10000	9500	9100	2500	7420	9150	8260	0086	9100	8850	7300	6300	9300	8730	7400	9250	10100	10900	8400	7400	8800	9850	9050	0009
SNOW COURSE	DRY FORK SNOTEL	EAST WILLOW CREEK SN	FARMINGTON CN SNOTEL	FARMINGTON CANYON L.	FARNSWORTH LK SNOTEL	FISH LAKE	FIVE POINTS LAKE SNO	FRANCES FLATS	G.B.R.C. HEADQUARTER	G.B.R.C. MEADOWS	GARDEN CITY SUMMIT	GEORGE CREEK	GOOSEBERRY R.S.	GOOSEBERRY R.S. SNOT	HARDSCRABBLE SNOTEL	HARRIS FLAT SNOTEL	HAYDEN FORK SNOTEL	HENRY'S FORK	HEWINTA SNOTEL	HICKERSON PARK SNOTE	HIDDEN SPRINGS	HOBBLE CREEK SUMMIT	HOLE-IN-ROCK SNOTEL	HORSE RIDGE SNOTEL	HUNTINGTON-HORSESHOE	INDIAN CANYON SNOTEL	JOHNSON VALLEY	KILFOIL CREEK	KILLYON CANYON	KIMBERLY MINE SNOTEL	KING'S CABIN SNOTEL	KLONDIKE NARROWS	KOLOB SNOTEL	LAKEFORK #1 SNOTEL	LAKEFORK BASIN SNOTE	LAKEFORK MOUNTAIN #3	LAMBS CANYON	LASAL MOUNTAIN LOWER	LASAL MOUNTAIN SNOTE	LILY LAKE SNOTEL	LITTLE BEAR LOWER
AVERAGE 1961-90	6.9	32.0	9.5	10.0	33.0	18.0	9.4	14.1	6.3	7.9						23.2	15.1	4.3	13.7	12.9	10.6	17.0	4.6	10.4	10.1	18.6	12.3	9.9	10.8	23.5	15.8	11.3	i	9.2	15.5	14.5	13.3	16.4	11.9	6.7	16.0
LAST YEAR	5.2	25.3	5. 8	9.7	27.8	15,5	6.0	10.7	4.8	5.7	7.5	8.6	9.5	13.7	17.1	21.4	15.8	2.2	12.0	18.6	6.2	19.2	6.3	6.8	10.1	18.3	13.7	7.5	12.2	19.8	13.0	8.7	1	6.3	12.5	ı	1	11.2	8.0	6.9	15.7
WATER	4.8	27.9	8.2	9.6	28.6	15.5	9.1	12.2	6.3	7.0	7.1	6.2	ю. 8	15.1	15.7	20.0	11.8	2.5	13.3	21.8	7.4	11.9	5.8	7.8	9.6	17.0	11.0	ດ. ດ.	8.4	22.8	14.6	7.5		5.5	14.1				8.0	4.7	13.2
SNOW	1	89	1	ı	t	1	27	ı	20	ı	23	29	ļ	58	ļ	67	ļ	13	ı	69	30	1	17	ļ	ı	ı	ı	21	ı	72	1	ı		ļ	ı				1	1	1
DATE	3/01	3/02	3/01	3/01	3/01	3/01	2/28	3/01	2/28	3/01	2/27	2/27	3/01	2/26	3/01	3/02	3/01	2/28	3/01	2/27	2/29	3/01	2/27	3/01	3/01	3/01	3/01	2/28	3/01	2/29	3/01	3/01		3/01	3/01				3/01	3/01	3/01
ELEV.	8900	8800	8000	8280	8000	0009	6450	10290	8100	9400	9340	8930	9800	10000	8750	8700	10600	8000	0086	9700	0006	7950	7900	8600	9580	9100	8200	7500	10300	7500	9200	8000	8200	8000	8000	9250	9250	9250	9200	9800	8350
SNOW COURSE	AGUA CANYON SNOTEL	ALTA CENTRAL	BEAVER DAMS SNOTEL	BEAVER DIVIDE SNOTL	BEN LOMOND PK SNOTL	BEN LOMOND TR SNOTL	BEVAN'S CABIN	BIG FLAT SNOTEL	BIRCH CROSSING	BLACK FLAT-U.M. CK S	BLACK'S FORK GS-EF	BLACK'S FORK JUNCTN	BOX CREEK SNOTEL	BRIAN HEAD	BRIGHTON SNOTEL	BRIGHTON CABIN	BROWN DUCK SNOTEL	BRYCE CANYON	BUCK FLAT SNOTEL	BUCK PASTURE	BUCKBOARD FLAT	BUG LAKE SNOTEL	BURT'S-MILLER RANCH	CAMP JACKSON SNOTEL	CASTLE VALLEY SNOTL	CHALK CK #1 SNOTEL	CHALK CK #2 SNOTEL	CHALK CREEK #3	CHEPETA SNOTEL	CITY CREEK	CLEAR CK RIDG #1 SNT	CLEAR CK RIDG #2 SNT	CORRAL	CURRANT CREEK SNOTEL	DANIELS-STRAWBERRY S	DESERET PEAK (d)	DESERET PEAK AM (d)	DESERET PEAK SNO (d)	DILL'S CAMP SNOTEL	DONKEY RESERVOIR SNO	DRY BREAD POND SNOTL

AVERAGE	70.00	21.2	) c	, ,	1.0	12.4	11.6	7.8	8.5	9.6	7.8																														٠							
LAST		F. 'S		) ·	16.4	5.8	7.6	3.7	7.6	7.3	7.1																																					
WATER		0 1		) 5	12.4	11.2	9.2	7.3	7.4	7.4	6.9																																			,		
SNOW		1 1	98	)	44	1	1	25	1	35	28																																					
DATE	10/6	3/0T	2/26	3/01	2/28	3/01	3/01	2/26	3/01	2/26	2/26																																					
ELEV.	0900	0000	8900	7500	7670	9200	8550	7400	9500	0006	8700																																					
SNOW COURSE	TORONO BAKI INTOR	TRICK CARRY CACTEL		VERNON CREEK SNOTET	TNOGIA	WEBSTER FLAT SNOTEL	WHITE RIVER #1 SNOTE	WHITE RIVER #3	WIDTSOE #3 SNOTEL	WRIGLEY CREEK	YANKEE RESERVOIR																																					
AVERAGE 1961-90	13	2.0	0.7	4	25.4	5.4	1	16.6	9.3	11.5	17.9	17.6	19.8	16.7	14.4 23.5	6.7	19.6	11.8	10.3	4.4	15.7	16.0	1	16.2	13.5	15.5	14.3	15.0	10.9	7.5	20.0	20.3	11.9	29.0	10.1	6.4	12.6	9.6	16.4	o ;	11.7	17.3	1	ı ;	20.4	29.3	20.3	
LAST	7 11		0	0	19.1	5.3	1	11.8	7.5	10.5	14.0	15.6	18.6	14.8	79.7	8	14.8	8.1	7.6	6.0	15.1	12.7	r	10.0	& 6	12.9	9.1	14.4	9.6	7.3	15.5	9 6	11.7	22.8	10.7	3.2	12.4	7.6	13.1	æ ;	10.1	18.2	1	I I	17.0	ر. اد د	19.6	
WATER			7.7	6	22.0	4.1	18.4	15.5	10.4	13.1	14.5	16.4	20.5	16.4	1 to	0.6	17.0	12.5	8.3	2.0	14.2	12.3	22.0	10.3	11.7	21.1	12.1	13.3	8.6	0.0	19.6	) a	11.2	27.2	7.8	6.3	10.4	1.8	13.6	10.0	10.5	15.8		( 1	15.8	29.3	21.0	
SNOW		1	1	1	ı	13	ı	ı	ı	43	ı	57	1	28	, ų	3 ,	64	49	36	11	25	ı		ι			ı	45	35	ı	1	יי	) )	1	37	25	1	30		30	43	ı				e C	70	
DATE	10/6	3/07	3/01	3/01	3/01	2/28	3/01	3/01	3/01	2/28	3/01	3/01	3/01	3/02	3/01	3/01	2/26	2/26	2/26	2/26	3/01	3/01	3/01	3/01	3/01	3/01	3/01	2/26	2/26	3/01	3/01	3/01	3/01	3/01	2/56	2/26	3/01	2/27	3/01	2/28	2/28	3/01		,	3/01	3/07	2/26	
ELEV.	0880	6100	8000	7500	8200	6130	6700	8800	8750	7000	0086	6950	8960	7400	0008	9500	9500	8600	7760	8200	7500	7500	7740	8050	0096	8800	9200	8200	7300	7900	8900	00001	7600	9700	10300	9300	10100	8550	8400	8200	8800	9200	8500	9100	8140	8400	9960	1 1 J
SNOW COURSE	Tamons or a a must	LITTLE BEAK SNOTEL	LONG FLAT SNOTEL	TONG TOT BY THE SNT	LOOKOUT PEAK SNOTEL	LOST CREEK RESERVOIR	LOUIS MEADOW SNOTEL	MAMMOTH-COTTONWD SNT	MERCHANT VALLEY SNOT	MIDDLE CANYON	MIDWAY VALLEY SNOTEL	MILL CREEK	MILL-D NORTH SNOTEL	MILL-D SOUTH FORK	MINING FORK SNOTEL	MOSBY MTN. SNOTEL	MT. BALDY R.S.	MUD CREEK #2	OAK CREEK	PANGUITCH LAKE R.S.	PARLEY'S CANYON SUM.	PARLEY'S CANYON SNOT	PARRISH CREEK SNOTEL	PAYSON R.S. SNOTEL	PICKLE KEG SNOTEL	PINE CREEK SNOTEL	RED PINE RIDGE SNOTE	REDDEN MINE LOWER	REES'S FLAT	ROCK CREEK SNOTEL	z	SEELEY CREEK SNOTEL	SMTTH MOREHOUSE SNTT	SNOWBIRD SNOTEL			K SNO	STILLWATER CAMP	STRAWBERRY DIVIDE SN	SUSC RANCH	TALL POLES	THAYNES CANYON SNOTL	THISTLE FLAT	TIMBERLINE			TONY GROVE K.S. TRIAL LAKE	

UTAH SURFACE	WATER	SUPPLY	INDEX
Snow Surveys	NRCS	USDA	
Basin or Region	SWSI/%	Percentile	Years with
			Similar SWSI
Bear River	-0.3	46%	98,99,70,68
Ogden River	-2.1	25%	91,94,99,68
Weber River	-0.9	39%	99,76,70,68
Tooele Valley	NA		
Provo	-0.3	46%	78,88,79,81
North Slope	NA	<u> </u>	
West Uintah Basin	3.2	88%	97,98,99
East Uintah Basin	-0.4	45%	91,99,85,82
Price River	1.65	70%	66,67,79,71
San Rafael	-0.3	46%	99,87,74,98
Moab	-0.7	42%	97,82,94,98
Upper Sevier River	-1.1	36%	67,99,66,78
Lower Sevier River	1.2	64%	99,75,98,79
Beaver River	-0.5	44%	62,67,71,78
Virgin River	1.2	65%	97,92,99,88
Snow Surveys		<u> </u>	SWSI Scale: -4 to 4
245 N Jimmy Doolittle	Rd		Percentile: 0 - 100%
Salt Lake City, UT			
(801) 524-5213			

. 

Issued by

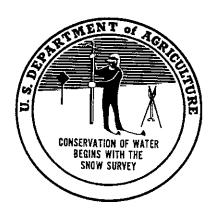
Pearlie S. Reed

hief
atural Resources Conservation Service
U.S. Department of Agriculture

Released by

Phillip J. Nelson State Conservationist Natural Resources Conservation Service Salt Lake City, Utah

YOU MAY OBTAIN THIS PRODUCT BY VISITING OUR WEB SITE @: http://utsnow.nrcs.usda.gov



245 North Jimmy Doolittie Road Salt Lake City, UT 84116



# Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT





Natural Resources Conservation Service

# Utah Basin Outlook Report April 1, 2000



# Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Vane O. Campbell, Area Conservationist, 340 N. 600 E., Richfield, UT 84701 - Phone: (435) 896-6441 Todd C. Nielson, Area Conservationist, 302 E. 1860 S., Provo, UT 84606 - Phone: (801) 377-5580 David M. Webster, Area Conservationist, 80 N. 500 W., Vernal, UT 84078 - Phone: (435)789-2100

# How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326 W, Whitten Building, 14th and Independence Ave., SW, Washington, D.C., 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

# STATE OF UTAH GENERAL OUTLOOK Apr 1, 2000

# **SUMMARY**

While January and February had tremendous snowpack increases, March generally moderated the trend with below normal accumulation amounts statewide. Thus this years peak April 1 snowpack is a little below average this year. Snowpacks statewide are now in the 80 to 95% range. March has not been kind to Utah snowpacks in recent years. In the past 15 years, there have been only 3 times when the snowpack has had a normal or above normal March increase. In fact, over the past 15 years we have averaged only a 61% of normal March snowpack increase. The hardest hit areas are in southern Utah which have averaged only 23% during that time frame. In southern Utah, snowpacks have begun melting and should accelerate rapidly given the warming temperatures. In the north, snowpacks are just starting the melt process and streamflows will start to rise quickly. Low elevation snowpacks are below normal in some areas due to warm temperatures. Given current snowpack and projected streamflow and reservoir levels, most areas will have below normal water supplies for this year, but should be able to adequately manage. February precipitation across the state was slightly below normal at 86%, a little less in the north and south (80%) and a little more in the east (Uintah Basin-Moab - 100%). This brings the seasonal total (Oct-Mar) to 83% of normal statewide, about the same relative to last month. An unusually dry fall has severely depleted soil moisture, which, in turn, could adversely affect spring snowmelt runoff. A much higher than normal amount of snowmelt could be infiltrated to the soil, leaving less for streamflow. Reservoir storage is generally in excellent condition at 85% of capacity. Most operators are following a conservative strategy in anticipation of a marginal runoff year. Streamflow forecasts call for near to below normal April-July runoff statewide.

# SNOWPACK

April first snowpacks in Utah, as measured by the NRCS SNOTEL system, are near to below average statewide, very similar to percentages published last month. Most areas have 80% to 95% of average snowpack. In southern Utah, snowpacks were above 100% for a short time, but have since lost snow due to melt. Lower elevation snowpacks are showing the affects of a warmer than normal winter and are melting quickly.

## PRECIPITATION

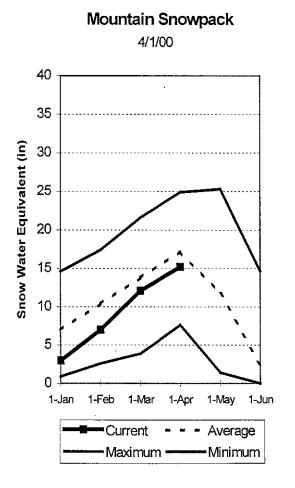
Mountain precipitation during March was slightly below average statewide, at 86% of normal. This brings the seasonal accumulation (Oct-Mar) up to 83% of average statewide. The seasonal accumulation was just 62% of normal on Feb 1 and only 39% on January 1.

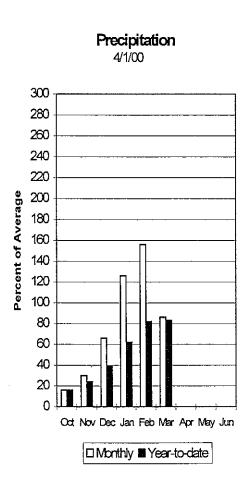
# RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 85% of capacity. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible in anticipation of a poor runoff season. Both Minersville and Otter Creek Reservoirs, which have undergone recent repairs, are currently storing water.

# **STREAMFLOW**

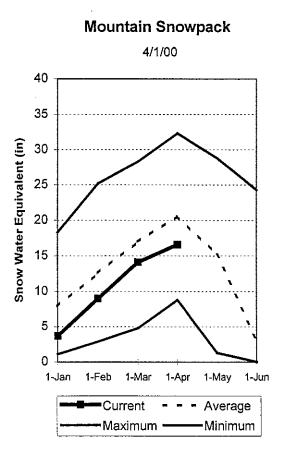
Snowmelt streamflows are expected to be near to below average across the entire state of Utah this year. Streamflows will most likely have lower peaks and low volumes this runoff season. Utah won't have an over-abundance of water this year, but has managed to avoid a potentially devastating drought condition.

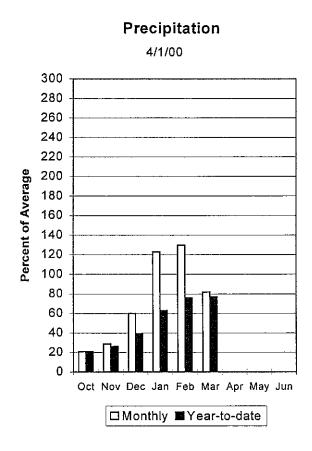


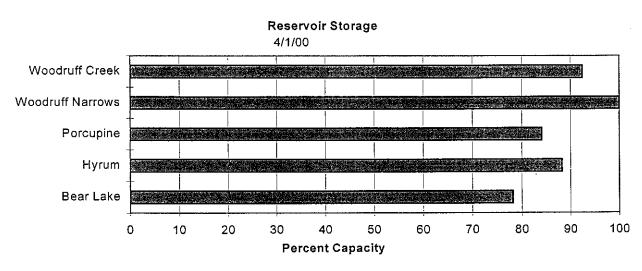


# Bear River Basin Apr 1, 2000

Snowpacks on the Bear River Basin are below average at 80% of normal, about 87% of last year and down a modest 3% relative to last month. Specific sites range from 60% to 136% of normal. Fall weather was extremely dry depleting soil moisture, which may have an adverse affect on spring runoff. March precipitation was below normal at 82%, which brings the seasonal accumulation (Oct-Mar) to 77% of average. Reservoir storage is at 79% capacity. In general, spring runoff conditions are below average, but have improved significantly since January.







# 

## BEAR RIVER BASIN Streamflow Forecasts - April 1, 2000

	=======			**=======		=========	========	<del></del>
		<<=====	Drier ====	== Future Co	onditions ==	===== Wetter	====>>	
Forecast Point	Forecast		==========	- Change Of F				
Torcoage Torrie	Period	90%	70%		Probable)	l 30%		70 V- 1
	F C1 10G	(1000AF)	(1000AF)		(% AVG.)	1	10%	30-Yr Avg.
	=======	(1000AF)	(1000AF)	(TOUGAP)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Bear R nr UI-WY State Line	APR-JUL	75	86	95	83	104	120	115
BEAR R nr Woodruff, UT	APR-JUL	70	94	116	78	143	193	149
BIG CK nr Randolph	APR-JUL	0.04	1.54	3.00	79	4.46	6.62	3.80
								0.00
BEAR R nr Randolph, UT	APR-JUL	25	64	90	76	116	155	118
SMITHS FK or Border, WY	APR-JUL	59	71	80	78	91	109	102
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	12.8	17.2	21	64	26	34	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	110	165	202	70	239	294	288
MONTPELIER CK nr Montpelier (Disc)(2		5.5	6.9	8.0	66	9.3	11.7	12.2
CUB R nr Preston	APR-JUL	23	28	32	68	36	41	47
								•
L BEAR R at Paradise, UT	APR-JUL	20	25	29	65	33	41	45
LOGAN R nr Logan	APR-JUL	75	83	90	84	97	108	107
BLACKSMITH Fk nr Hyrum	APR-JUL	33	36	39	72	42	47	54
	========	=========						

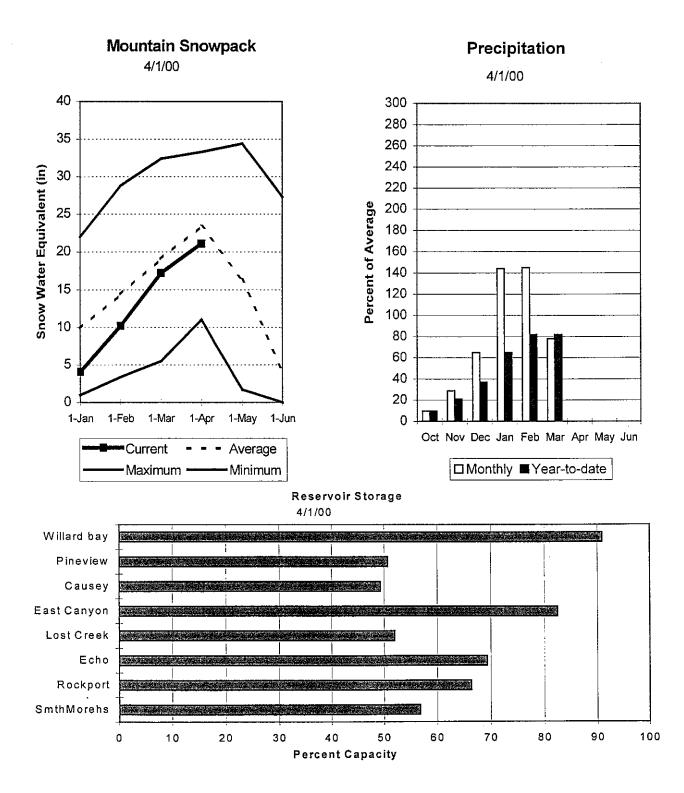
Reservoir Stor	BEAR RIVER BASIN age (1000 AF) - End	of Marc	า 		BEAR RIVER BASIN Watershed Snowpack Analysis - April 1, 2000					
Reservoir	Usable Capacity	*** Usa This Year	able Stora Last Year	ge *** Avg	Watershed	Number of Data Sites	This Year Last Yr			
BEAR LAKE HYRUM PORCUPINE WOODRUFF NARROWS WOODRUFF CREEK	1421.0 15.3 11.3 57.3 4.0	1111.3 13.5 9.5 57.3 3.7	1095.3 15.2 0.6 57.3 4.0	998.0 12.2 5.0	BEAR RIVER, UPPER (abv BEAR RIVER, LOWER (blw LOGAN RIVER RAFT RIVER BEAR RIVER BASIN		90 84 80 110 87	83 79 83 124 80		

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.(2) The value is natural flow actual flow may be affected by upstream water management.

# Weber and Ogden River Basins Apr 1, 2000

Snowpack on the Weber and Ogden Watersheds is at 90% of average, about 110% of last year and the same relative to last month. Individual sites range from 0% to near 126% of average. Lower elevation snowpack is generally below normal. Dry fall weather depleted soil moisture, which could have an adverse impact on spring runoff. Precipitation during March was below normal at 78% of average, bringing the seasonal accumulation (Oct-Mar) to 82% of average. Reservoir storage on the Weber system is at 74% of capacity. Spring runoff conditions are near to below average.



WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - April 1, 2000

		=== <b>==</b> ===============================			========	***********	=========	
		<<======	Drier ====	== Future C	onditions =	===== Wetter	. =====>>	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SMITH AND MOREHOUSE CK nr Oakley	APR - JUN	17.7	22	25	83	28	32	30
WEBER R nr Oakley	APR - JUL	74	89	100	82	111	126	122
ROCKPORT RESERVOIR inflow	APR - JUL	78	97	110	82	123	142	134
CHALK CK at Coalville, Ut	APR-JUL	25	32	37	84	42	49	44
WEBER R nr Coalville, Ut	APR-JUL	76	97	112	82	127	148	136
ECHO RESERVOIR Inflow	APR-JUL	75	114	140	80	166	205	176
LOST CK Res Inflow	APR-JUL	6.2	10.9	14.0	81	17.1	22	17.2
E CANYON CK nr Morgan	APR-JUL	18.3	21	25	83	29	35	30
WEBER R at Gateway	APR-JUL	206	247	275	79	303	344	347
S FORK OGDEN R nr Huntsville	APR-JUL	36	43	48	76	53	60	63
PINEVIEW RESERVOIR Inflow	APR-JUL	63	84	98	79	112	133	124
WHEELER CK nr Huntsville	APR-JUL	3.27	4.18	4.80	77	5.42	6.33	6.20

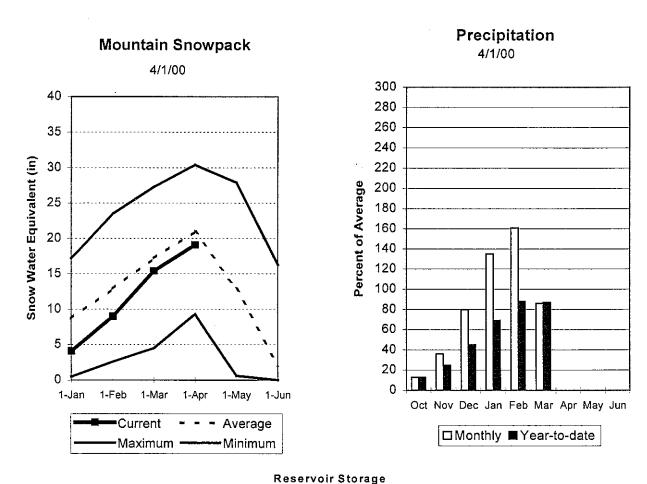
	& OGDEN WATERSHEDS in brage (1000 AF) - End				WEBER & OGDEN WATERSHEDS in Utah   Watershed Snowpack Analysis - April 1, 2000					
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge *** Avg	Watershed	Number of Data Sites	****	ar as % of Average		
CAUSEY EAST CANYON ECHO LOST CREEK PINEVIEW ROCKPORT WILLARD BAY	7.1 49.5 73.9 22.5 110.1 60.9 215.0	3.5 40.8 51.2 11.7 55.8 40.4 195.4	3.1 41.9 52.4 3.3 82.0 34.9 184.7	2.6 36.6 49.5 13.3 55.6 30.9 125.3	OGDEN RIVER WEBER RIVER WEBER & OGDEN WATERSHE	4 9 DS 13	103 113 110	83 95 90		

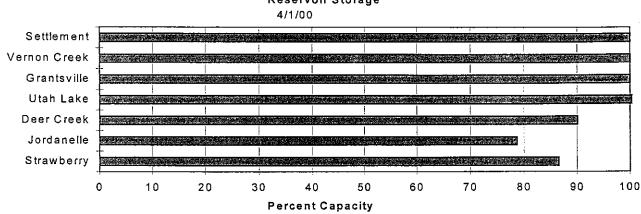
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

# Utah Lake, Jordan River & Tooele Valley Basins Apr 1, 2000

Snowpacks over these watersheds are at 91% of average, about 133% of last year, up just 2% relative to last month. Individual sites range from 0% to 132% of average. Fall weather was extremely dry depleting soil moisture, which could have an adverse affect on spring runoff. Precipitation during Mar was below normal at 86%, bringing the seasonal accumulation (Oct-Mar) to 87% of average. Reservoir storage is at 91% of capacity. Spring runoff conditions are near to below normal.





# UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - April 1, 2000

=======================================	=========		:=======	=========	=========	==========		
		<<======	Drier ====	== Future Co	nditions =	===== Wetter	=====>>	
Forecast Point	Forecast	=======	******	= Chance Of E	xceeding * :	=========		
	Period	90%	70%	50% (Most		30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)		(% AVG.)	(1000AF)	(1000AF)	(1000AF)
PAYSON CK or Payson	APR-JUL	 1.50	1.97	3.00	68	4.03	5.98	4.40
SPANISH FORK or Castilla	APR-JUL	7.4	34	5.50	73	74	108	74
HOBBLE CK nr Springville	APR-JUL	7.3	11.1	12.8	68	14.5	18.2	18.8
PROVO R nr Hailstone	APR - JUL	43	66	80	73	94	117	109
PROVO R below Deer Creek Dam	APR - JUL	37	69	89	70	109	141	128
AMERICAN FORK or American Fk.	APR-JUL	16.6	21	24	75	27	31	32
UTAH LAKE inflow	APR-JUL	75	182	235	73 ·	288	376	324
L COTTONWOOD CRK nr SLC	APR-JUL	31	36	39	100	42	47	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	25	31	34	90	37	43	38
PARLEY'S CK nr SLC	APR-JUL	4.8	9.8	12.9	81	16.0	21	15.9
MILL CK nr SLC	APR-JUL	2.40	4.13	5.20	80	6.27	7.99	6.50
DELL FK nr SLC	APR-JUL	1.92	4.64	6.10	86	7.56	10.22	7.10
EMIGRATION CK nr SLC	APR-JUL	0.50	2.30	3.50	83	4.70	6.72	4,20
CITY CK nr SLC	APR-JUL	3.82	6.12	7.50	90	8.88	11.20	8.30
VERNON CK nr Vernon (Acre Feet)	APR-JUL	678	924	1140	85	1406	1916	1340
SETTLEMENT CK nr Tooele (Acre Feet)	APR-JUL	750	1317	1930	84	2828	4966	2300
S WILLOW CK nr Grantsville	APR-JUL	0.60	1.79	2.60	84	3.41	4.60	3.10
UTAH LAKE, JORDAN R	UTAH LAKE, JORDAN RIVER & TOOELE VALLEY					JORDAN RIVER	& TOOELE VA	LLEY

	JORDAN RIVER & TOO age (1000 AF) - End				UTAH LAKE, JORDAN Watershed Snowpack			
Reservoir	Usable Capacity		ble Stora Last	ge ***	######################################	Number of		======= r as % of =======
		Year	Year	A∨g		Data Sites	Last Yr	Average
DEER CREEK	149.7	134.8	123.3	97.9	PROVO RIVER & UTAH LAKE	7	127	79
GRANTSVILLE	3.3	3,3	3.3		PROVO RIVER	4	127	83
SETTLEMENT CREEK	1.0	1.0	1.0	0.6	JORDAN RIVER & GREAT SA	LT 6	126	99
STRAWBERRY-ENLARGED	1105.9	956.6	982.0		TOOELE VALLEY WATERSHED	s 3	177	102
UTAH LAKE	870.9	883.8	907.5	722.9	UTAH LAKE, JORDAN RIVER	& 16	133	91
VERNON CREEK	0.6	0.6	η Α	0.5	•			

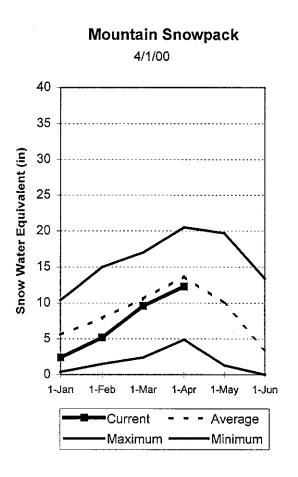
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

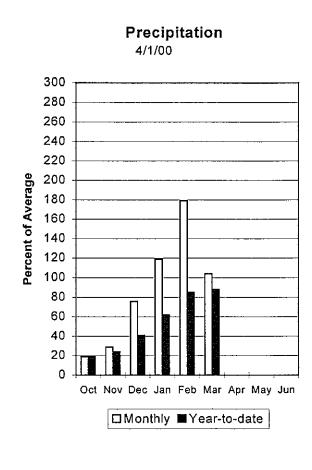
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

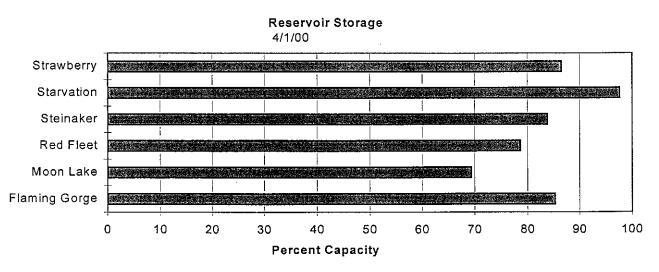
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

# Uintah Basin and Dagget SCD's Apr 1, 2000

Snowpacks across the Uintah Basin and North Slope areas are near average at 93%, about the same as last year, and the same relative to last month. The North Slope ranges from 79% to 116% and the Uintah Basin ranges from 58% to 130% of average. Extremely dry fall weather has depleted soil moisture, which may adversely affect spring runoff. Precipitation during Mar was near normal at 104%, bringing the seasonal accumulation (Oct-Mar) to 88% of average. Reservoir storage is excellent at 88% of capacity. Springtime runoff conditions are near to slightly below normal.







# UINTAH BASIN & DAGGET SCD'S Streamflow Forecasts - April 1, 2000

<<===== Drier ===== Future Conditions ====== Wetter ====>> Forecast Point Forecast 90% Period 70% 50% (Most Probable) 30% 10% 30-Yr Avg. (1000AF) (1000AF) (1000AF) (% AVG.) (1000AF) (1000AF) (1000AF) . ------Blacks Fork nr Robertson APR-JUL EF of Smiths Fork nr Robertson APR-JUL 17.4 Flaming Gorge Reservoir Inflow APR-JUL BIG BRUSH CK abv Red Fleet Resv APR-JUL 11.3 15.3 18.0 19.8 Ashley Creek or Vernal APR - JUL WF DUCKESNE RIVER or Hanna APR-JUL 10.0 13.9 17.0 DUCHESNE R nr Tabiona APR-JUL UPPER STILLWATER RESV inflow APR-JUL ROCK CK or Mountain Home APR-JUL DUCHESNE R abv Knight Diversion APR - JUI STRAWBERRY RES or Soldier Springs APR-JUL CURRANT CREEK RESV Inflow APR-JUL 7.7 11.2 13.6 16.0 19.5 STARVATION RESERVOIR inflow ILL-SQA MOON LAKE Inflow APR-JUL Yellowstone River nr Altonah APR-JUL รก DUCKESNE R at Myton APR-JUL UINTA R or Neola APR-JUL Whiterocks River nr Whiterocks APR-JUL DUCHESNE R nr Randlett APR - JUI 

e (1000 AF) - End	of Marc	h		Watershed Snowpack	Analysis -	April 1,	2000
Capacity This Last Watershed		Number of ata Sites	of ======				
3749.0 49.5 33.4 33.4 165.3 1105.9	3199.0 34.3 28.0 28.0 161.4 956.6	3190.6 35.6 33.4 33.4 136.2 982.0	32.0 22.6 22.6 114.1	ASHLEY CREEK BLACK'S FORK RIVER SHEEP CREEK DUCHESNE RIVER LAKE FORK-YELLOWSTONE CR STRAWBERRY RIVER UINTAH-WHITEROCKS RIVERS	2 2 1 11 E 4 4 2	129 195 99 143 114 88 170	98 98 91 116 86 82 88 91
	Usable Capacity 3749.0 49.5 33.4 33.4 165.3	Usable *** Us. Capacity This Year  3749.0 3199.0 49.5 34.3 33.4 28.0 33.4 28.0 165.3 161.4	Capacity This Last Year Year 3749.0 3199.0 3190.6 49.5 34.3 35.6 33.4 28.0 33.4 33.4 28.0 33.4 165.3 161.4 136.2	Usable   *** Usable Storage ***   Capacity   This Last   Year Year Avg	Usable	Usable   *** Usable Storage ***   Watershed of   Data Sites    3749.0 3199.0 3190.6   UPPER GREEN RIVER in UTAH 6   49.5 34.3 35.6 32.0   ASHLEY CREEK   2   33.4 28.0 33.4 22.6   BLACK'S FORK RIVER   2   34.2   35.4 28.0 33.4 22.6   SHEEP CREEK   1   165.3 161.4 136.2 114.1   DUCHESNE RIVER   11   1105.9 956.6 982.0   LAKE FORK-YELLOWSTONE CRE 4	Usable

UINTAH BASIN & DAGGET SCD'S

The average is computed for the 1961-1990 base period.

UINTAH BASIN & DAGGET SCD'S

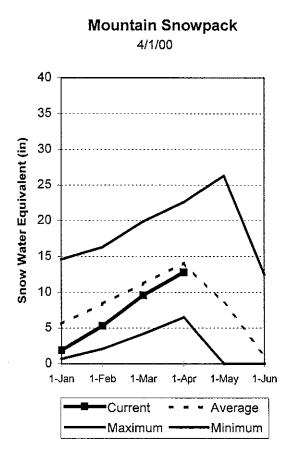
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

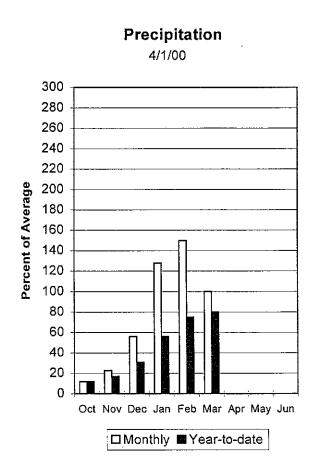
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

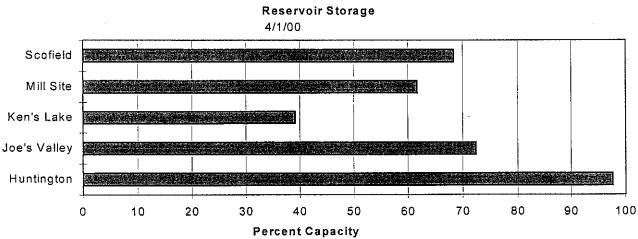
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

# Carbon, Emery, Wayne, Grand and San Juan Co. Apr 1, 2000

Snowpacks in this region are at 91% of average, almost double that of last year, and up 5% relative to last month. Individual sites range from 74% to 137% of average. Extremely dry fall weather has depleted soil moisture, which could have an adverse affect on spring runoff. Precipitation during Mar was average at 100%, bringing the seasonal accumulation (Oct-Mar) to 80% of normal. Reservoir storage is at 70% of capacity. Springtime runoff conditions remain slightly below normal but have significantly improved since January and are much better than last year.







## CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - April 1, 2000

	*****	<b></b>	=== <b>===</b> ==============================	======================================	onditions =	====== Wetter	. ====>> .==========	-=====================================
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Gooseberry Creek nr Scofield	APR-JUL	7.2	8.9	10.0	86	11.1	12.8	11.7
Scofield Reservoir inflow	APR-JUL	8.8	34	37	84	40	65	44
White River blw Tabbyune Creek	APR-JUL	6.6	9.4	11.6	62	14.0	18.0	18.7
Green River at Green River, UT	APR-JUL	1665	2281	2700	86	3119	3735	<b>31</b> 51
Electric Lake inflow	APR-JUL	9.9	12.2	14.0	93	16.0	19.2	15.1
HUNTINGTON CK nr Huntington	APR-JUL	12.3	33	36	88	40	60	41
JOE'S VALLEY RESV Inflow	APR-JUL	23	33	40	76	47	57	53
Ferron Creek nr Ferron	APR-JUL	25	30	33	85	37	42	39
Colorado River nr Cisco	APR-JUL	2612	3379	3900	94	4421	5188	4132
Mill Creek at Sheley Tunnel nr Moab	APR-JUL	2.47	3.98	5.00	83	6.02	7.53	6.00
Indian Creek Tunnel nr Monticello	MAR-JUL	0.46	0.78	1.00	116	1.22	1.54	0.86
Indian Creek abv Cottonwood Creek	MAR-JUL	1.02	2.20	3.00	118	3.80	4.98	2.55
Seven Mile Creek nr Fish Lake	APR-JUL	2.28	4.50	6.00	92	7.50	9.72	6.50
Muddy Creek nr Emery	APR-JUL	8.5	12.4	15.0	77	17.6	22	19.6
North Ck ab R.S. nr Monticello	MAR-JUL	0.11	0.66	1.30	96	2.16	3.82	1.35
South Ck ab Lloyd's Res nr Monticell		0.48	0.88	1.22	93	1.61	2.29	1.31
Recapture Ck bl Johnson Ck nr Blandi		2.73	4.92	6.40	105	7.88	10.07	6.07
San Juan River nr Bluff		333	552	700	61	848	1067	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Reservoir Storage (1000 AF) - End of March

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - April 1, 2000

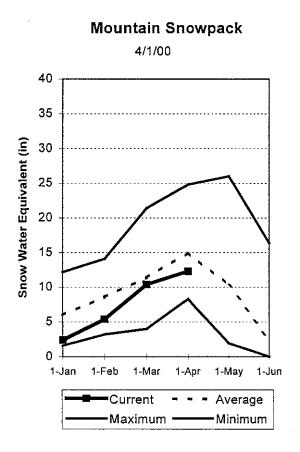
Reservoir	Usable Capacity	1			Watershed	Number of	This Yea	r as % of
		Year	Year	Avg	111111111111111111111111111111111111111	Data Sites	Last Yr	Average
HUNTINGTON NORTH	4.2	4.1	4.1	3.8	PRICE RIVER	3	152	88
JOE'S VALLEY	61.6	44.6	45.0	45.6	SAN RAFAEL RIVER	3	152	91
KEN'S LAKE	2.3	0.9	1.6		MUDDY CREEK	1	165	74
MILL SITE		NO REPO	RT	Į.	FREMONT RIVER	3	158	87
SCOFIELD	65.8	45.0	47.4	33.3 l	LASAL MOUNTAINS	1	0	86
				ŀ	BLUE MOUNTAINS	1	1340	137
				I	WILLOW CREEK	1	1600	113
				-	CARBON, EMERY, WAYNE,	GRA 13	190	91
######################################		========					=======	=======

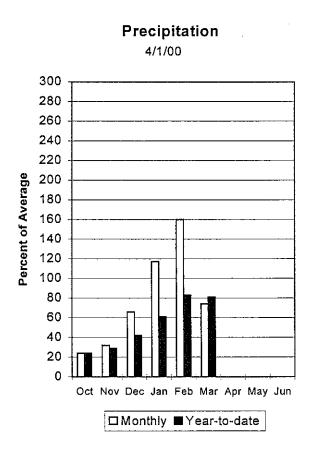
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

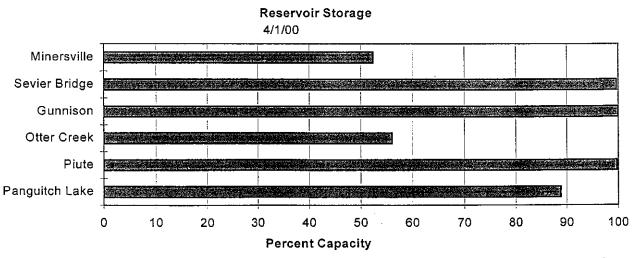
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.(2) - The value is natural flow - actual flow may be affected by upstream water management.

# Sevier and Beaver River Basins Apr 1, 2000

Snowpacks on the Sevier River Basin are slightly below normal at 86% of average, 166% of last year, and down 8% relative to last month. Individual sites range from 0% to 119% of average. Extremely dry fall weather has depleted soil moisture, which may have an adverse impact on runoff. Precipitation during Mar was below average at 74% of normal, bringing the seasonal accumulation (Oct-Mar) to 81% of average. Reservoir storage is in excellent condition at 93% of capacity. Otter Creek and Minersville Reservoirs have been under repair but are both storing water this year. Water supply conditions are below normal.







# SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - April 1, 2000

		<<======	Drier ====	== Future C	onditions =	===== Wetter	=====>>			
Forecast Point	Forecast	======		= Chance Of E	Exceeding *	===========	======			
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)		
	=========		========	=======================================		=======================================		=========		
SEVIER R at Hatch	APR-JUL	24	35	41	76	47	58	54		
SEVIER R nr Circleville	APR-JUL	29	45	55	73	65	79	75		
SEVIER R nr Kingston	APR-JUL	30	52	58	70	64	86	83		
ANTIMONY CK nr Antimony	APR-JUL	2.59	4.15	5.00	68	5.85	7.40	7.40		
E F SEVIER R nr Kingston	APR-JUL	9.9	14.2	22	73	30	42	30		
SEVIER R blw Piute Dam	APR-JUL	31	65	86	75	107	141	115		
CLEAR CK nr Sevier	APR-JUL	5.5	11.1	14.5	69	17.9	24	21		
SALINA CK at Salina	APR-JUL	1.9	4.9	12.3	70	19.7	34	17.6		
PLEASANT CK nr Pleasant	APR-JUL	4.51	5.86	6.50	77	7.14	8.41	8.50		
EPHRAIM CK or Ephraim	APR-JUL	4.9	7.8	9.3	74	10.8	13.7	12.6		
SEVIER R nr Gunnison	APR-JUL	65	93	167	70	241	375	239		
CHICKEN CK nr Levan	APR-JUL	2.86	3.65	4.30	92	5.07	6.46	4.70		
OAK CK nr Oak City (Acre Feet)	APR-JUL	1073	1361	1600	90	1881	2387	1777		
BEAVER R nr Beaver	APR-JUL	16.1	18.9	l 21	81	23	27	26		
MINERSVILLE RESERVOIR Inflow	APR-JUL	10.7	12.0	13.0	78	14.0	15.7	16.7		

Reservoir Storage (	1000 AF) - End			Watershed Snowpack Analysis - April 1, 2000					
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge *** Avg	Watershed	Number of ta Sites		r as % of ====== Average	
GUNNISON MINERSVILLE (RkyFd) OTTER CREEK PIUTE SEVIER BRIDGE PANGUITCH LAKE	20.3 23.3 52.5 71.8 236.0 22.3	20.3 12.2 29.4 71.6 235.2 19.8	20.3 23.3 52.6 71.7 231.9 20.9	16.3 14.3 35.8 46.2 136.2	UPPER SEVIER RIVER (south EAST FORK SEVIER RIVER SOUTH FORK SEVIER RIVER LOWER SEVIER RIVER (inclu BEAVER RIVER SEVIER & BEAVER RIVER BAS	3 5 6 2	177 191 170 170 170 129 166	86 88 85 85 86 84	

SEVIER & BEAVER RIVER BASINS

The average is computed for the 1961-1990 base period.

SEVIER & BEAVER RIVER BASINS

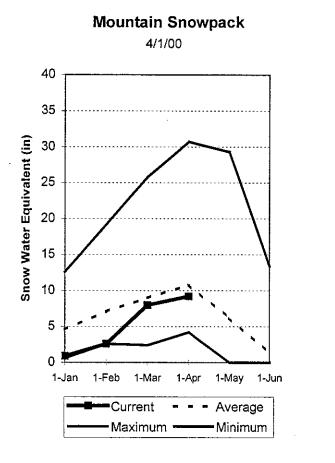
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

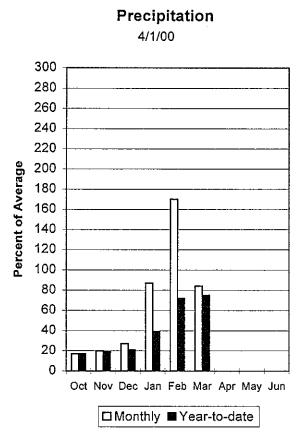
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

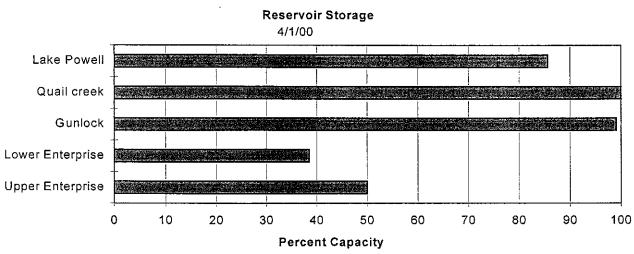
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

# E. Garfield, Kane, Washington, & Iron co. Apr 1, 2000

Snowpacks in this region are slightly below normal at 85% of average, about 230% of last year, and down about 3% relative to last month. Individual sites range from 0% to 143% of average. Extremely dry fall weather has depleted soil moisture, which may have an adverse affect on springtime runoff. Precipitation was below normal during Mar at 84% of average, bringing the seasonal accumulation (Oct-Mar) to 75% of normal. Reservoir storage is in excellent shape at 89% of capacity. General water supply conditions are just slightly below normal.







## E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - April 1, 2000

		<b></b>				==========	========	
		<<======	: Drier ====	== Future Co	onditions ==	===== Wetter	====>>	
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * = Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lake Powell inflow Virgin River nr Virgin Virgin River nr Hurricane	APR-JUL APR-JUL APR-JUL	4087 22 23	5583 38 38	6600 45 45	85 68 63	7617 53 52	9113 75 76	7735 66 72
Santa Clara River nr Pine Valley Coal Creek nr Cedar City	APR-JUL APR-JUL	1.80 8.2	3.62 11.3	4.50 13.8	85 73	5.48 16.5	8.48 21	5.30 18.8

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Reservoir Storage (1000 AF) - End of March E. GARFIELD, KANE, WASHINGTON, & IRON Co. Watershed Snowpack Analysis - April 1, 2000

Reservoir	Usable Capacity	This	able Stora Last		Watershed	Number of		r as % of
		Year	Year	Avg	Da	ata Sites	Last Yr	Average
GUNLOCK	10.4	10.3		======	MIRCIN DINER		2/0	
					VIRGIN RIVER	כ	260	81
LAKE POWELL	24322.0	20819.0	20916.0		PAROWAN	2	151	84
QUAIL CREEK	40.0	40.0	38.5		ENTERPRISE TO NEW HARMONY	<i>r</i> 2	2233	120
UPPER ENTERPRISE	10.0	5.0	7.8		COAL CREEK	2	237	77
LOWER ENTERPRISE	2.6	1.0	0.8		ESCALANTE RIVER	2	135	88
					E. GARFIELD, KANE, WASHIN	۱ 9	230	85
=======================================		=======	=======					

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

SNOW COURSE DATA FOR THE STATE OF UTAH As of April 2000

LAST AVERAGE		11.2 16.6	0.5 7.1	27.5 31.1	20.0 24.4	15.7 20.5		17.6 17.5	12.2 14.5	8.4 17.2						10.9 18.2		H	_	ın		0.0				14.7 24.2 5.8 11.9		•					a	2		9	11 9 17 0	•	٠.
WATER	CONTENT	17.7	8.0	39.2	25.2	15.6	7.8	17.0	19,1	17.0	24.7	12.3	21.2	11.1	7.2	17.0	4.9	14.5	11.1	12.5	8.0	0.0	14.0	6.9	21.7	23.3 12.1	7.3	13.5	0.2	15.3	11.1	18.4	21.2	12.0	15.1	7.9	15.0		9.4
MONS	DEPTH	ı	1	ı	78	ı	18	ı	47	44	64	37	65	31	ı	ı	ı	ı	40	1	ı	0	35	1	, (	G 1	21	42	ਜ	ı	ı	46	1	ı	ı ·	23	45	1	7.7
DATE	1	4/01	4/01	4/01	3/22	4/01	3/27	4/01	3/29	3/29	3/29	3/31	3/27	3/27	4/01	4/01	4/01	4/01	3/29	4/01	4/01	3/29	3/29	4/01	4/01	3/28 4/01	3/27	3/31	3/29	4/01	4/01	3/31	4/01	4/01	4/01	3/29	3/28	007.0	3/30
ELEV.								-		8700	10000	7600	8840	8400	7900	7250	7700	9100	10000	9500	9100	2500	7420	9150	0000	9100	8850	7300	6300	9300	8730	7400	9250	10100	10900	8400	7400	0000	2000
SNOW COURSE		DRY FORK SNOTEL	EAST WILLOW CREEK SN	FARMINGTON CN SNOTEL	FARMINGTON CANYON L.	FARNSWORTH LK SNOTEL	FISH LAKE	FIVE POINTS LAKE SNO	FRANCES FLATS	G.B.R.C. HEADQUARTER	G.B.R.C. MEADOWS	GARDEN CITY SUMMIT	GEORGE CREEK	GOOSEBERRY R.S.	GOOSEBERRY R.S. SNOT	HARDSCRABBLE SNOTEL	HARRIS FLAT SNOTEL	HAYDEN FORK SNOTEL	HENRY'S FORK	HEWINTA SNOTEL	HICKERSON PARK SNOTE	HIDDEN SPRINGS	HOBBLE CREEK SUMMIT	HOLE-IN-ROCK SNOTEL	HOKSE KIDGE SNOTEL	INDIAN CANYON SNOTE:	JOHNSON VALLEY	KILFOIL CREEK	KILLYON CANYON	KIMBERLY MINE SNOTEL	KING'S CABIN SNOTEL	KLONDIKE NARROWS	KOLOB SNOTEL	LAKEFORK #1 SNOTEL	LAKEFORK BASIN SNOTE	LAKEFORK MOUNTAIN #3	LAMBS CANYON	TASAT, MOINTAIN LOWER	WILLIAM TO THE TANK THE THE TANK THE THE TANK TH
AVERAGE	1961-90	6.7	38.7	12.3	11.4	40.8	20.0	11.7	18.9	6.0	10.3	9.6	9.4	13.8	21.2	23.1	27.3	18.9	3.6	18.1	16.1	12.6	21.3	7.0	9 6	23.9	15.8	7.5	14.3	27.3	19.8	14.7	4.0	11.0	18.3	19.2	16.7	7 12	-
LAST	YEAR	0.0	26.9	1.5	6.4	30.9	14.4	w w	12.0	1.1	3.6	7.4	8.9	7.9	11.5	18.5	20.6	17.1	0.0	12.1	14.2	3.2	21.7	m r	-i o	21.6	16.1	4.7	11.9	20.4	13.2	9.6	6.0	4.2	10.0	ı	ı	α.	•
WATER	CONTENT	6.2	33.4	7.5	9.2	36.4	18.4	10.4	13.8	4.7	8.8	6.6	9.1	11.6	20.4	19.7	23.6	14.6	9.0	17.7	12.8	13.4	16.3	0.0	7 C	22.5	13.6	5.1	11.4	25.6	19.0	0.6	ر د د	6.4	17.8				
SNOW	DEPTH	1	94	•	ı	•	ı	90	1	σ'n	ı	26	30	1	26	ı	64	1	ო		45	44	. :	12	1 1		i	16	•	92	1	ı	23	ı	•				
DATE		4/01	3/30	4/01	4/01	4/01	4/01	3/31	4/01	3/30	4/01	3/29	3/29	4/01	3/27	4/01	3/31	4/01	3/31	4/01	3/29	3/31	4/01	3/29	To/*	4/01	4/01	3/29	4/01	3/29	4/01	4/01	3/29	4/01	4/01				
ELEV.		00	8800	8000	8280	8000	0009	6450	10290	8100	9400	9340	8930	0086	10000	8750	8700	10600	8000	9800	9700	0006	7950	7900	0000	9200	8200	7500	10300	7500	9200	8000	8200	8000	8000	9250	9250	9250	
II		8900	88	ã	w	_																									SNT	SNI		CURRANT CREEK SNOTEL	DANIELS-STRAWBERRY S			DESERET PEAK SNO (d)	

DE	SNOW DEPTH	WATER CONTENT 0.0	LAST YEAR	AVERAGE 1961-90 .1	SNOW COURSE TRIAL LAKE SNOTEL TROUT CREEK SNOTEL	ELEV. 9600 9400	DATE 4/01 4/01	SNOW DEPTH	WATER CONTENT 21.8 12.1	LAST A YEAR 1 21.0 6.3	AVERAGE 1961-90 25.0 11.8
	υ	6.7	ο e.	5.5	UPPER JOES VALLEY	8900	3/29	- 28	10.0	6.3 2.2	11.8
- 0.0 - 27.1	27.3	~ <i>~</i>	0.0 21.7	.1 26.5	VERNON CREEK SNOTEL VIPONT	7500	4/01 3/27	่ 4. ย	11.6 14.8	4.3	12.1
0 0 0	18.4		0.2	1.9	WEBSTER FLAT SNOTEL WHITE RIVER #1 SNOTE	9200	4/01	1 1	12.4	6 0	16.5
	18.0		12.2	21.0	WITE RIVER #3	7400	3/28	. 16	5.6	0.0	7.0
12.5	12.5		60 t	12.4	WIDTSOE #3 SNOTEL	9500	4/01	1	10.9	7.1	12.1
19.4	19.4		13.1	24.6	WAIGLEI CREEN YANKEE RESERVOIR	8700	3/2/	30 26	10.1 9.5	0 4 0 4	10.0
56 19.5	19.5		18.2	20.9			i	) I	1	•	) )
	27.4		19.6	24.1							
53 17.4	17.4		14.4	19.6							
	21.4		26.0	29.9							
- 12.0	12.0		9.8	11.3							
58 21.8	21.8		14.6	24.3							
	15.2		8.2	13.7							
~	11.8		7.1	12.9							
Η.	1.0		0.0	4.0							
50 18.6	18.6		14.3	18.8							
14.1	14.1		£0.3	۲. ۲							
13.8	13.8		10.1	22.6							
- 14.5	14.5		9.7	18.8							
- 25.5	25.5		12.7	21.4							
	15.9		4.6	18.0							
40 15.8 35 12.4	15.8		14.0	18.2							
	8.7		6.7	9.0							
- 25.7	25.7		16.2	26.0							
	13.0		9.1	15.3							
64 22.6	22.6		23.6	25.8							
13.1	13.1		12.4	14.6 23.5							
39 13.0	13.0		10.2	13.5 5.5							
20 7.4	7.4		0.0	7.2							
П	13.1		14.3	16.6							
28 8.8	8.8		9.6	10.8							
	17.2		11.5	19.8							
ī	10.0		0.0	7.0							
36 13.5	13.5		7	14.7							
	20.3		21.9	22.1							
45 17.4	17.4		9.1	17.3							
37 14.2	14.2		6.1	14.8							
	18.0		15.2	25.5							
	34.5		43.3	36.9							
25 9.7	7.6		14.0	11.5							
63 25.1	25.1		19.7	24.2							

UTAH SURFACE	WATER	SUPPLY	INDEX
Snow Surveys	NRCS	USDA	
Basin or Region	SWSI/%	Percentile	Years with
			Similar SWSI
Bear River	-0.3	46%	98,99,70,68
Ogden River	-2.1	25%	91,94,99,68
Weber River	-0.6	42%	76,70,68,98
Tooele Valley	NA		
Provo	0.3	54%	81,70,99,68
North Slope	NA		
West Uintah Basin	2.21	76%	87,86,97,99
East Uintah Basin	-0.4	45%	91,99,85,82
Price River	1.1	63%	98,74,82,66
San Rafael	-0.3	46%	99,87,74,98
Moab	-0.7	42%	97,82,94,98
Upper Sevier River	-0.4	45%	76,71,75,74
Lower Sevier River	1.2	64%	99,75,98,79
Beaver River	-0.5	44%	62,67,71,78
Virgin River	1.2	65%	97,92,99,88
Snow Surveys			SWSI Scale: -4 to 4
245 N Jimmy Doolittle Rd			Percentile: 0 - 100%
Salt Lake City, UT			
(801) 524-5213			

.

,

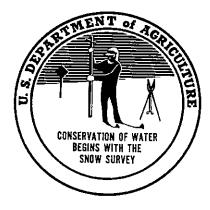
	•		
			,
		·	
	•		
			•

Issued by

Pearlie S. Reed Chief Natural Resources Conservation Service U.S. Department of Agriculture Released by

Phillip J. Nelson State Conservationist Natural Resources Conservation Service Salt Lake City, Utah

YOU MAY OBTAIN THIS PRODUCT BY VISITING OUR WEB SITE @: http://utsnow.nrcs.usda.gov



245 North Jimmy Doolittle Road Salt Lake City, UT 84116



# Utah Basin Outlook Report

Natural Resources Conservation Service
Salt Lake City, UT





Natural Resources Conservation Service

# Utah Basin Outlook Report May 1, 2000



# Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Vane O. Campbell, Area Conservationist, 340 N. 600 E., Richfield, UT 84701 - Phone: (435) 896-6441
Todd C. Nielson, Area Conservationist, 302 E. 1860 S., Provo, UT 84606 - Phone: (801) 377-5580
David M. Webster, Area Conservationist, 80 N. 500 W., Vernal, UT 84078 - Phone: (435)789-2100

# How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326 W, Whitten Building, 14th and Independence Ave., SW, Washington, D.C., 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

# STATE OF UTAH GENERAL OUTLOOK May 1, 2000

# **SUMMARY**

April, typically a cool, wet month, was anything but cool or wet. In fact, new record snowmelt for the month was set statewide (173% of average) and in the Uintah basin (208% of average). All watersheds had phenomenal snowmelt this past month: Bear -180%, the Weber - 163%, the Sevier - 196%, southeast Utah - 186% of normal snowmelt. Most watersheds lost over half of their total available snow last month, some up to 80% of their peak snowpack leaving very little to sustain streamflow in the later months. While the snow was melting in record proportions, little of that snowmelt was finding its way to the creeks and streams. In fact, most streams struggled to get near average April flows such as the Logan - 92%, Weber at Oakley - 77%, and the Sevier at Hatch - 77% of average. Given record April snowmelt and by any standard, only modest April streamflow, where is all the water going? Infiltration is the primary loss. Last fall was extremely dry and soil moisture levels were depleted. Soil moisture in the upper layers needs to be near saturation in order to produce streamflow from snowmelt. Most of this year's snowmelt is simply regenerating this soil moisture level. Secondarily, hot clear days with substantial wind will increase evaporation and sublimation rates directly from the snowpack. While these losses are far less than moisture loss to the soil, given the correct conditions, they can be substantial. Snowpacks currently range from 32% of average in southern Utah, to mediocre 60% on the Weber Watershed. All of the low elevation snowpack is gone as well as much of the mid elevation. Even the high elevation snowpack is showing signs of rapid melt. April precipitation across the state was much below normal at 44%. This brings the seasonal total (Oct-Apr) to 77% of normal statewide, a little less relative to last month. Reservoir storage is generally in excellent condition at 85% of capacity. Most operators are following a conservative strategy in anticipation of a marginal runoff year. Streamflow forecasts call for much below normal April-July runoff statewide.

# SNOWPACK

May first snowpacks in Utah, as measured by the NRCS SNOTEL system, are much below average statewide ranging from 32% in the south to 60% in the north. All low elevation snow has melted as well as a significant portion of the mid elevation pack. In southern Utah, snowpacks were above 100% for a short time, but have since lost snow due to melt. Many areas such as Southeastern Utah, the Dirty Devil and the Escalante have, or are nearly melted out. Remaining snowpacks should melt quickly with little potential to sustain high base flows in the summer months.

# **PRECIPITATION**

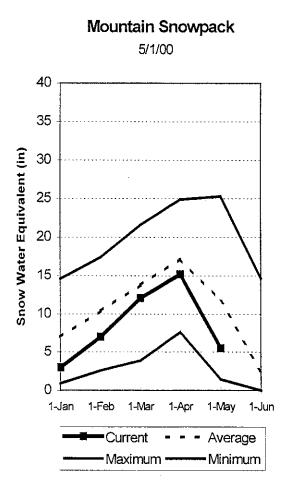
Mountain precipitation during April was much below average statewide, at 44% of normal. This brings the seasonal accumulation (Oct-Apr) to 77% of average statewide. The seasonal accumulation was just 62% of normal on Feb 1 and only 39% on January 1.

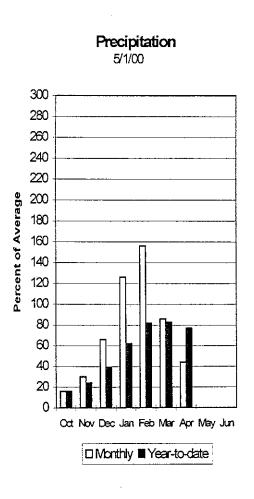
# RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 85% of capacity. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible in anticipation of a poor runoff season. Both Minersville and Otter Creek Reservoirs, which have undergone recent repairs, are currently storing water.

# STREAMFLOW

Snowmelt streamflows are expected to be much below average across the entire state of Utah this year. Streamflows will most likely have lower peaks and low volumes this runoff season. As of April 1 conditions, it appeared that Utah had been able to avoid some very dry conditions, but given current snowpack and runoff conditions, it appears that maybe we are in for a long, hot summer.





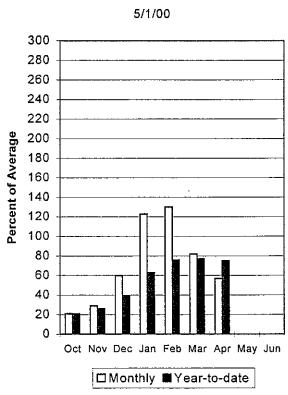
# Bear River Basin May 1, 2000

Snowpacks on the Bear River Basin are much below average at 50% of normal, about 41% of last year. April had 180% of average snowmelt, a lot of melt, which produced very little streamflow. Specific sites range from 0% to 88% of normal. Fall weather was extremely dry depleting soil moisture, which is having an adverse affect on spring runoff. April precipitation was much below normal at 57%, which brings the seasonal accumulation (Oct-Apr) to 75% of average. Reservoir storage is at 81% capacity. In general, spring runoff conditions are poor. Runoff could be short, with low peaks and low volumes.

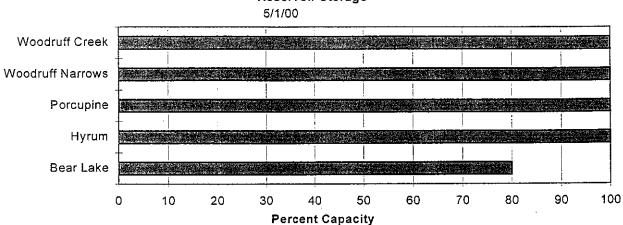
# Mountain Snowpack

# 5/1/00 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-Mar 1-Jan 1-Арг 1-May Current Average Maximum Minimum

# Precipitation



# Reservoir Storage



## BEAR RIVER BASIN Streamflow Forecasts - May 1, 2000

=======================================	=======	=========	========	=========		:==== <b>==</b> ====	=========		
		<<=====	Drier ====	== Future C	onditions =	====== Wetter	====>>		
Forecast Point	Forecast	=======		= Chance Of	Exceeding *	===========	=======		
	Period	90% (1000AF)	70% (1000AF)	1	Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)	
Bear R nr UT-WY State Line	APR-JUL	68	73	77	67	81	87	 115	:
BEAR R nr Woodruff, UT	APR-JUL	62	80	95	64	113	145	149	
BIG CK nr Randolph	APR-JUL	0.11	0.87	2.30	61	3.73	5.84	3.80	
BEAR R nr Randolph, UT	APR-JUL	25	55	75	64	95	125	118	
SMITHS FK nr Border, WY	APR-JUL	49	57	63	62	69	80	102	
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	11.9	15.4	18.3	56	22	28	33	
BEAR R.blw Stewart Dam nr Montpelier	APR-JUL	101	148	180	63	212	259	288	
MONTPELIER CK nr Montpelier (Disc)(2	APR-JUL	4.7	5.7	6.6	54	7.6	9.3	12.2	
CUB R nr Preston	APR-JUL	22	27	30	64	33	38	47	
L BEAR R at Paradise, UT	APR-JUL	20	24	26	58	29	34	45	
LOGAN R nr Logan	APR-JUL	63	68	71	66	75	80	107	
BLACKSMITH Fk or Hyrum	APR-JUL	25	28	30	56	32	36	54	_
DEAD DIV	ED DACIN					DEAD DIVED DA	CIU		•

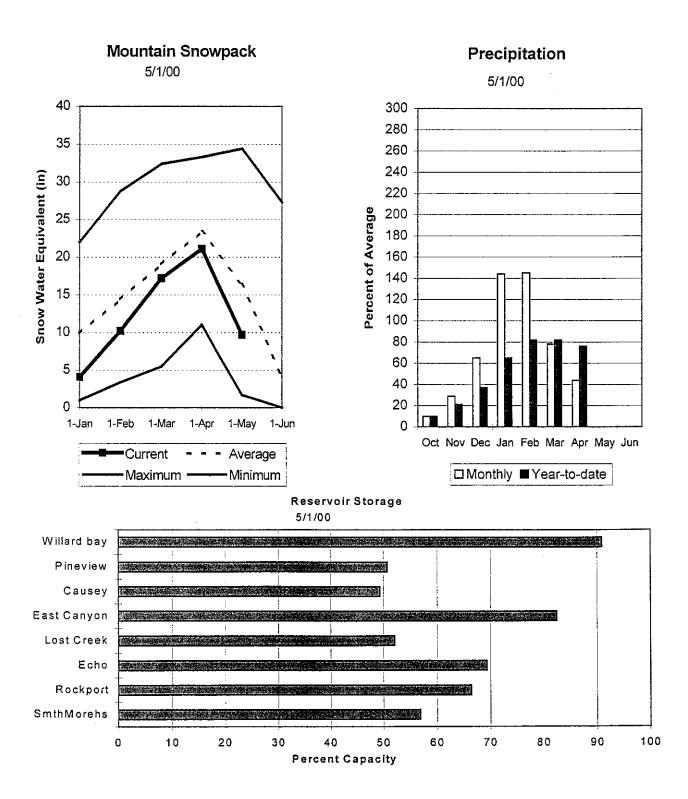
Reservoir Storage	(1000 AF) - End	of April	;	Watershed Snowpack Analysis - May 1, 2000							
Reservoir	Usable Capacity	*** Usa This	able Stora Last	ige ***	Watershed	Number of		r as % of			
		Year	Year	Avg	D	ata Sites	Last Yr	Average			
BEAR LAKE	1421.0	1136.0	1145.4	1052.0	BEAR RIVER, UPPER (abv H	a 6	41	53			
HYRUM	15.3	15.3	15.3	13.2	BEAR RIVER, LOWER (blw H	a 8	41	48			
PORCUPINE	11.3	11.3	11.0	9.5	LOGAN RIVER	4	45	66			
WOODRUFF NARROWS	57.3	57.3	57.3		RAFT RIVER	1	52	81			
WOODRUFF CREEK	4.0	4.0	4.0		BEAR RIVER BASIN	14	41	50			

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) The value is natural flow actual flow may be affected by upstream water management.

# Weber and Ogden River Basins May 1, 2000

Snowpack on the Weber and Ogden Watersheds is at 60% of average, about 49% of last year. This area had 163% of average snowmelt in April and produced only 77% of average streamflow, a poor indicator of the remaining runoff season. Dry fall weather depleted soil moisture, which is having an adverse impact on spring runoff. Precipitation during April was much below normal at 44% of average, bringing the seasonal accumulation (Oct-Apr) to 76% of average. Reservoir storage on the Weber system is at 74% of capacity. Spring runoff conditions are poor, runoff could be short, with below normal peaks and volume.



# WEBER & OGDEN WATERSHEDS in Utah

Streamflow Forecasts - May 1, 2000

		<<======	- Drier ====	== Future C	onditions =	====== Wette	======================================	=======================================
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SMITH AND MOREHOUSE CK or Oakley	APR-JUN	12.9	16.5	19.0	63	22	25	30
WEBER R or Oakley	APR-JUL	63	73	79	65	85	95	122
ROCKPORT RESERVOIR inflow	APR-JUL	64	75	82	61	89	100	134
CHALK CK at Coalville, Ut	APR-JUL	16.0	24	29	66	34	42	44
WEBER R nr Coalville, Ut	APR-JUL	60	73	82	60	91	104	136
ECHO RESERVOIR Inflow	APR-JUL	69	93	110	63	127	151	176
LOST CK Res Inflow	APR-JUL	2.5	6.7	9.5	55	12.3	16.5	17.2
E CANYON CK nr Morgan	APR-JUL	11.0	16.4	20	67	24	29	30
WEBER R at Gateway	APR-JUL	131	172	200	58	228	269	347
S FORK OGDEN R nr Huntsville	APR-JUL	29	36	40	64	44	51	63
PINEVIEW RESERVOIR Inflow	APR-JUL	49	67	80	65	93	111	124
WHEELER CK nr Huntsville	APR-JUL	2.09	3.05	3.70	60	4.35	5.31	6.20

WEBER & OGDEN WATERSHEDS in Utah Reservoir Storage (1000 AF) - End of April	WEBER Watershed	Snow
Usable   *** Usable Storage ***	 	

OGDEN WATERSHEDS in Utah owpack Analysis - May 1, 2000

Reservoir	Usable Capacity	This	ble Stora Last	ge ***	Watershed	Number of	3555555	r as % of
		Year	Year ,	_Avg		Data Sites	Last Yr	Average
CAUSEY	7.1	5.3	4.5	2.6	OGDEN RIVER		45	47
EAST CANYON	49.5	42.8	45.2	41.5	WEBER RIVER	9	51	68
ECHO	<i>7</i> 3.9	56.0	60.4	54.2	WEBER & OGDEN WATERSHE	os 13	49	60
LOST CREEK	22.5	14.0	6.0	14.3				
PINEVIEW	110.1	74.2	98.3	76.6				
ROCKPORT	60.9	44.9	40.6	36.8				
WILLARD BAY	215.0	198.4	187.2	139.7				

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.(2) - The value is natural flow - actual flow may be affected by upstream water management.

# Utah Lake, Jordan River & Tooele Valley Basins May 1, 2000

Snowpacks over these watersheds are at 55% of average, about 49% of last year. This area had 146% of average snowmelt in April and produced just 87% of average streamflow, a poor indicator of the remaining snowmelt season. Individual sites range from 0% to 148% of average. Fall weather was extremely dry depleting soil moisture, which is having an adverse affect on spring runoff. Precipitation during April was much below normal at 45%, bringing the seasonal accumulation (Oct-Apr) to 80% of average. Reservoir storage is at 91% of capacity. Spring runoff conditions are much below normal.

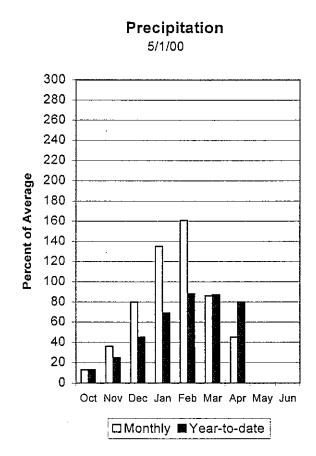
# **Mountain Snowpack** 5/1/00 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 1-Jan 1-Feb 1-Mar 1-Apr 1-May

Current

Maximum

Average

Minimum



### Reservoir Storage 5/1/00 Settlement Vernon Creek Grantsville Utah Lake Deer Creek Jordanelle Strawberry 70 80 90 100 0 10 20 30 40 50 60 Percent Capacity

# UTAH LAKE, JORDAN RIVER & TOOELE VALLEY

Streamflow Forecasts - May 1, 2000

	=========	Stream tow	rorecasts	- may 1, 2000	) 			
Forecast Point	Forecast Period		70% (1000AF)	= Chance Of E   50% (Most	xceeding *	30% (1000AF)		30-Yr Avg. (1000af)
PAYSON CK nr Payson	APR-JUL	1.10	1.42	2.60	59	3.78	5.72	4.40
SPANISH FORK nr Castilla	APR-JUL	7.4	29	48	65	67	100	74
HOBBLE CK nr Springville	APR-JUL	6.4	9.5	10.9	58	12.3	15.4	18.8
PROVO R nr Hailstone	APR-JUL	41	60	71	65	82	101	109
PROVO R below Deer Creek Dam	APR-JUL	33	61	78	61	95	123	128
AMERICAN FORK nr American Fk.	APR-JUL	13.8	17.7	20	63	22	26	32
UTAH LAKE inflow	APR-JUL	52	142	195	60	248	340	324
L COTTONWOOD CRK nr SLC	APR-JUL	27	32	34	87	37	41	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	23	27	30	79	33	37	38
PARLEY'S CK nr SLC	APR - JUL	3.7	8.0	10.7	67	13.4	17.8	15.9
MILL CK nr SLC	APR - JUL	2.40	4.00	5.00	77	6.00	7.61	6.50
DELL FK nr SLC	APR - JUL	1.35	3.55	4.90	69	6.15	8.52	7.10
EMIGRATION CK nr SLC	APR-JUL	0.29	2.05	3.10	74	4.15	5.88	4.20
CITY CK nr SLC	APR-JUL	2.74	4.75	6.00	72	7.25	9.30	8.30
VERNON CK nr Vernon (Acre Feet)	APR-JUL	480	651	800	60	983	1332	1340
SETTLEMENT CK nr Tooele (Acre Feet)	APR-JUL	1060	1196	1300	57	1413	1594	2300
S WILLOW CK nr Grantsville	APR-JUL	0.03	1.07	1.80	58	2.53	3.61	3.10

HATU	LAKE,	JORDAN	RIVER	&	TOOEL	Ξ	VALLEY
Reservoir	Stora	age (100	00 AF)	-	End a	ŕ	April

UTAH LAKE, JORDAN RIVER & TODELE VALLEY Watershed Snowpack Analysis - May 1, 2000

	*************	=======	=======	=======			========	=========
Reservoir	Usable Capacity	*** Usable Storage *** This Last			Watershed	Number of	This Year as % of	
		Year	Year	Avg	water siled	Data Sites	Last Yr	Average
DEER CREEK	149.7	126.7	125.5	106.9	PROVO RIVER & UTAH LAKE	7	40	34
GRANTSVILLE	3.3	2.8	3.3		PROVO RIVER	4	55	44
SETTLEMENT CREEK	1.0	1.0	1.0	0.7	JORDAN RIVER & GREAT SA	LT 6	53	77
STRAWBERRY-ENLARGED	1105.9	971.8	986.3		TOOELE VALLEY WATERSHED	\$ 3	56	52
UTAH LAKE	870.9	864.9	906.5	766.8	UTAH LAKE, JORDAN RIVER	& 16	49	55
VERNON CREEK	n 6	0.6	0.6	0.6	• •			

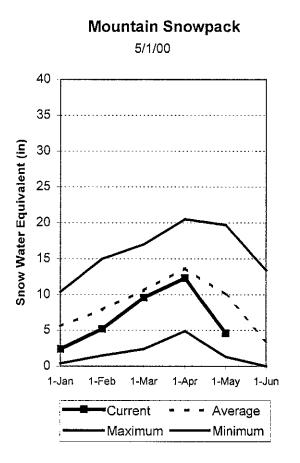
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

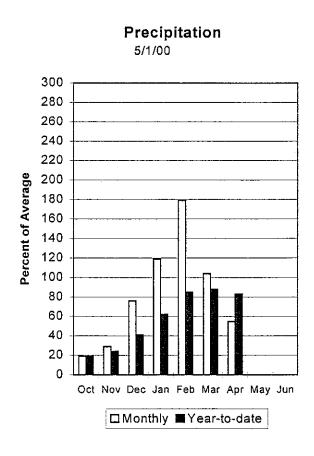
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

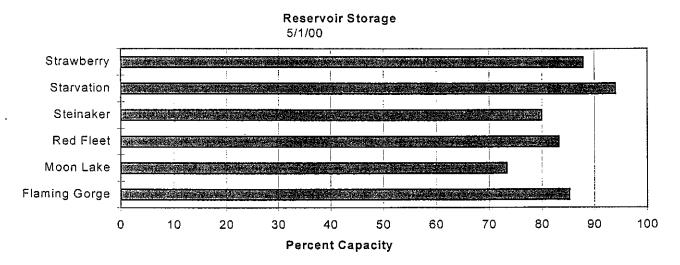
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

# Uintah Basin and Dagget SCD's May 1, 2000

Snowpacks across the Uintah Basin and North Slope areas are much below average at 49%, about 38% of last year. This area had an April snowmelt of 208% of average (a record April loss) with streamflow much below what would have been expected, a poor indicator of the remaining snowmelt season. The North Slope ranges from 0% to 90% and the Uintah Basin ranges from 0% to 67% of average. Extremely dry fall weather has depleted soil moisture, which is adversely affecting spring runoff. Precipitation during April was much below normal at 55%, bringing the seasonal accumulation (Oct-Apr) to 83% of average. Reservoir storage is at 89% of capacity. Springtime runoff conditions are poor, with low flows expected.







# UINTAH BASIN & DAGGET SCD'S Streamflow Forecasts - May 1, 2000

		<<=====	Drier ====	== Future Co	onditions ==	===== Wette	-====>>	
Forecast Point	Forecast	======		= Chance Of E	xceeding * :		=======	
	Period	90%	70%	50% (Most		30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Blacks Fork nr Robertson	APR-JUL	 50	60	66	70	72	82	95
EF of Smiths Fork nr Robertson	APR-JUL	16.8	18.5	19.8	66	21	23	30
Flaming Gorge Reservoir Inflow	APR-JUL	520	672	775	65	878	1030	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	7.4	11.3	14.0	71	16.7	21	19.8
Ashley Creek nr Vernal	APR-JUL	18.9	27	32	63	37	45	51
WF DUCHESNE RIVER or Hanna	APR-JUL	7.8	11.3	14.0	54	17.0	22	26
DUCHESNE R nr Tabiona	APR-JUL	50	59	65	62	71	80	105
UPPER STILLWATER RESV inflow	APR-JUL	37	48	55	68	63	73	81
ROCK CK nr Mountain Home	APR-JUL	48	58	65	69	72	82	94
DUCKESNE R abv Knight Diversion	APR-JUL	77	103	120	64	137	163	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	18.3	25	30	51	36	45	59
CURRANT CREEK RESV Inflow	APR-JUL	6.5	9.8	12.0	57	14.2	17.5	21
STARVATION RESERVOIR inflow	APR-JUL	30	48	60	51	72	90	117
MOON LAKE Inflow	APR-JUL	31	39	45	65	51	59	69
Yellowstone River nr Altonah	APR-JUL	26	36	43	66	50	60	65
DUCHESNE R at Myton	APR-JUL	47	67	105	40	143	199	263
UINTA R nr Neola	APR-JUL	29	43	53	62	63	77	85
Whiterocks River nr Whiterocks	APR-JUL	18.3	28	35	60	42	52	58
DUCHESNE R nr Randlett	APR-JUL	53	79	100	31	191	326	328

UINTAH BASIN & DAGGET SCD'S Reservoir Storage (1000 AF) - End of April					`UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - May 1, 2000				
Reservoir	Usable   Capacity	*** Usa This Year	able Stora Last Year	ge *** Avg	Watershed D	Number of ata Sites		r as % of	
FLAMING GORGE MOON LAKE STEINAKER STEINAKER STARVATION STRAWBERRY-ENLARGED	3749.0 49.5 33.4 33.4 165.3 1105.9	3196.9 36.3 26.7 26.7 155.3 971.8	3140.3 33.3 34.0 34.0 141.5 986.3	31.8 23.0 23.0 113.5	UPPER GREEN RIVER IN UTA ASHLEY CREEK BLACK'S FORK RIVER SHEEP CREEK DUCHESNE RIVER LAKE FORK-YELLOWSTONE CR STRAWBERRY RIVER UINTAH-WHITEROCKS RIVERS UINTAH BASIN & DAGGET SC	2 2 1 11 E 4 4 2	31 27 48 0 40 52 9 27 38	51 45 66 0 45 63 5 41	

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

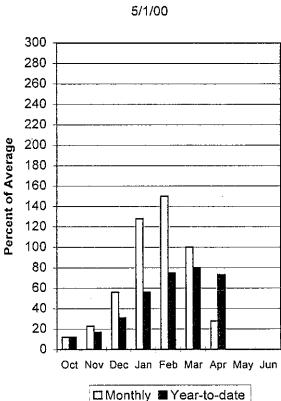
## Carbon, Emery, Wayne, Grand and San Juan Co. May 1, 2000

Snowpacks in this region are at 29% of average, about 30% of last year. This area had an April snowmelt of 186% of average with little streamflow, a poor indicator of the remaining snowmelt season.. Individual sites range from 0% to 79% of average. Extremely dry fall weather has depleted soil moisture, which is having an adverse affect on spring runoff. Precipitation during April was much below average at 28%, bringing the seasonal accumulation (Oct-Apr) to 73% of normal. Reservoir storage is at 71% of capacity. Springtime runoff conditions are poor and much below normal flows are expected. Streams may have peaked already and if not, will very soon. June and July will most likely have base flows conditions.

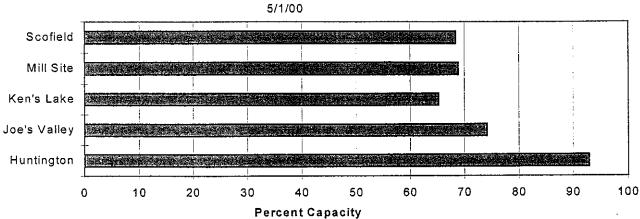
# **Mountain Snowpack**

5/1/00 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Mar 1-May 1-Feb \*Current Average Maximum Minimum

# Precipitation



# Reservoir Storage



#### CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - May 1, 2000

==== <b>==========</b> ======================	========	=========	========	======================================				
		<b>&lt;&lt;====</b>	Drier ====	== Future Co	onditions =	===== Wetter	====>>	
Forecast Point	Forecast		=======================================	= Chance Of E	xceeding * :		======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Gooseberry Creek nr Scofield	APR-JUL	 6.2	7.9	9.0	77	10.1	11.8	11.7
Scofield Reservoir inflow	APR - JUL	18.1	22	25	57	28	32	44
White River blw Tabbyune Creek	APR-JUL	4.5	6.5	8.0	43	9.7	12.5	18.7
Green River at Green River, UT	APR-JUL	1249	1756	2100	67	2445	2952	3151
Electric Lake inflow	APR-JUL	6.6	8.2	9.5	63	10.9	13.1	15.1
HUNTINGTON CK nr Huntington	APR-JUL	18.8	24	27	66	30	35	41
JOE'S VALLEY RESV Inflow	APR-JUL	15.0	25	32	60	39	49	53
Ferron Creek nr Ferron	APR-JUL	20	23	25	64	27	31	39
Colorado River nr Cisco	APR-JUL	2416	3002	3400	82	3798	4384	4132
Mill Creek at Sheley Tunnel nr Moab	APR-JUL	2.06	3.21	4.00	67	4.79	5.94	6.00
Indian Creek Tunnel nr Monticello	MAR - JUL	0.17	0.49	0.70	81	0.91	1.23	0.86
Indian Creek abv Cottonwood Creek	MAR - JUL	0.40	1.35	2.00	78	2.65	3.60	2.55
Seven Mile Creek nr Fish Lake	APR-JUL	1.97	3.24	4.10	63	4.96	6.23	6.50
Muddy Creek nr Emery	APR-JUL	6.3	9.4	11.5	59	13.6	16.7	19.6
North Ck ab R.S. nr Monticello	MAR-JUL	0.15	0.43	0.70	52	1.03	1.64	1.35
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	0.22	0.47	0.70	53	0.97	1.46	1.31
Recapture Ck bl Johnson Ck nr Blandi	MAR-JUL	1.03	2.74	3.90	64	5.06	6.77	6.07
San Juan River nr Bluff	APR-JUL	293	437	535	46	633	777	1152
			==========					

CARBON,	EMERY,	WAYNE,	GRAND,	, & 9	SAN	JUAN	Co.
Reservoir	Storage	e (1000	AF) -	End	of	April	

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - May 1, 2000

Reservoir	Usable Capacity	*** Usa This	ble Storag	ge ***	Watershed	Number of	This Yea	r as % of
	/	Year	Year	Avg		Data Sites	Last Yr	Average
HUNTINGTON NORTH JOE'S VALLEY KEN'S LAKE MILL SITE SCOFIELD	4.2 61.6 2.3 16.7 65.8	3.9 45.7 1.5 11.5 49.5	4.2 45.6 1.7 16.7 48.0	3.9 46.8  6.3 36.6	PRICE RIVER SAN RAFAEL RIVER MUDDY CREEK FREMONT RIVER LASAL MOUNTAINS BLUE MOUNTAINS	3 3 1 3 1	34 48 0 2 0	37 46 0 2 0
					WILLOW CREEK CARBON, EMERY, WAYNE,	1 GRA 13	0 30	0 29

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

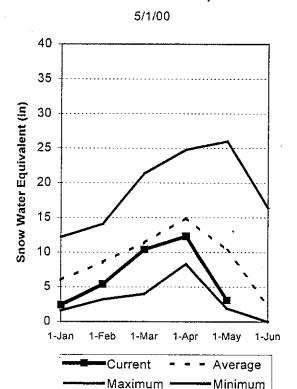
The average is computed for the 1961-1990 base period.

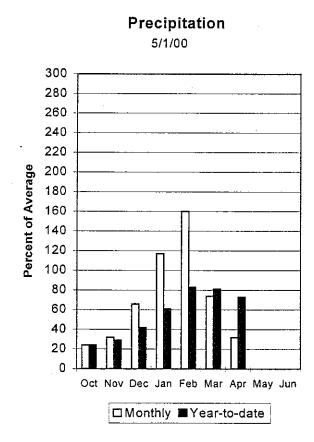
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) - The value is natural flow - actual flow may be affected by upstream water management.

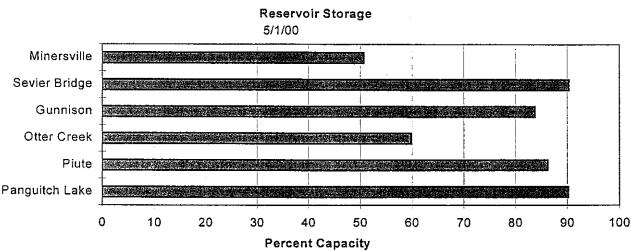
## Sevier and Beaver River Basins May 1, 2000

Snowpacks on the Sevier River Basin are much below normal at 32% of average, 33% of last year. The Sevier had an April snowmelt of 196% of average with only 77% of average streamflow, a poor indicator of the remaining runoff season. Individual sites range from 0% to 70% of average. Extremely dry fall weather has depleted soil moisture, which is having an adverse impact on runoff. Precipitation during April was much below average at 32% of normal, bringing the seasonal accumulation (Oct-Apr) to 73% of average. Reservoir storage is in excellent condition at 85% of capacity. Otter Creek and Minersville Reservoirs have been under repair but are both storing water this year. Water supply conditions are much below normal.

#### Mountain Snowpack







### 

#### SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - May 1, 2000

202222222222222222222222222	=========	========			=========	=========		=========
		<<======	Drier ====	== Future Co	nditions ==	===== Wetter	` ====>>	
Forecast Point	Forecast		=======================================			=======================================	=======	
	Period	90% (1000AF)	70% (1000AF)	50% (Most (1000AF)	Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SEVIER R at Hatch	APR-JUL	13.5	24	30	56	36	46 .	54
SEVIER R nr Circleville	APR-JUL	17.3	32	41	55	50	65	75
SEVIER R nr Kingston	APR-JUL	21	38	48	58	58	75	83
ANTIMONY CK or Antimony	APR-JUL	2.52	3.66	4.30	58	4.94	6.07	7.40
E F SEVIER R or Kingston	APR-JUL	4.8	10.6	18.0	60	25	38	30
SEVIER R blw Piute Dam	APR-JUL	20	52	72	63	92	130	115
CLEAR CK nr Sevier	APR-JUL	6.1	10.3	12.8	61	15.3	19.5	21
SALINA CK at Salina	APR-JUL	1.1	4.0	10.4	59	16.8	30	17.6
PLEASANT CK nr Pleasant	APR-JUL	3.57	4.61	5.10	60	5.59	6.63	8.50
EPHRAIM CK nr Ephraim	APR-JUL	3.7	5.9	7.2	57	8.5	10.8	12.6
SEVIER R nr Gunnison	APR-JUL	62	56	141	59	226	356	239
CHICKEN CK nr Levan	APR-JUL	2.00	2.44	2.80	60	3.21	3.91	4.70
OAK CK nr Oak City (Acre Feet)	APR-JUL	733	882	1000	56	1134	1363	1777
BEAVER R nr Beaver	APR~JUL	12.2	14.3	16.0	62	17.9	21	26
MINERSVILLE RESERVOIR Inflow	APR~JUL	9.2	9.7	10.0	60	10.3	10.9	16.7
SEVIER & REA	14444444444444 14444444444444444444444	======== ?/NS	=========		95V159	& REAVER RIV	:========= /FR RASINS	

SEVIER & Reservoir Storage	BEAVER RIVER BAS (1000 AF) - End				SEVIER & BEA Watershed Snowpack			00
Reservoir	Usable Capacity	*** Usa This Year	ble Stora Last Year	ge *** Avg	Watershed	Number of Data Sites		r as % of Average
GUNNISON MINERSVILLE (RkyFd) OTTER CREEK PIUTE SEVIER BRIDGE PANGUITCH LAKE	20.3 23.3 52.5 71.8 236.0 22.3	17.0 11.8 31.4 61.9 213.1 20.1	20.3 24.3 52.6 64.5 236.0 21.7	14.9 14.6 39.5 44.7 136.0	UPPER SEVIER RIVER (SOU EAST FORK SEVIER RIVER SOUTH FORK SEVIER RIVER LOWER SEVIER RIVER (inc BEAVER RIVER SEVIER & BEAVER RIVER B	3 5 lu 6 2	19 2 27 37 52 33	17 2 25 38 52 32

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

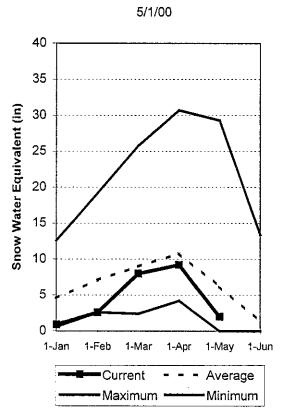
The average is computed for the 1961-1990 base period.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) The value is natural flow actual flow may be affected by upstream water management.

# E. Garfield, Kane, Washington, & Iron co. May 1, 2000

Snowpacks in this region are much below normal at 32% of average, about 41% of last year. This area had an April snowmelt of 157% of normal with very little streamflow, a poor indicator of the remaining snowmelt season. Individual sites range from 0% to 61% of average. Extremely dry fall weather has depleted soil moisture, which is having an adverse affect on springtime runoff. Precipitation was much below normal during April at 38% of average, bringing the seasonal accumulation (Oct-Apr) to 71% of normal. Reservoir storage is in excellent shape at 89% of capacity. General water supply conditions much below normal.

## **Mountain Snowpack**



# Precipitation 5/1/00 Percent of Average Oct Nov Dec Jan Feb Mar Apr May Jun ☐ Monthly ■ Year-to-date

#### Reservoir Storage 5/1/00 Lake Powell Quail creek Gunlock Lower Enterprise Upper Enterprise **Percent Capacity**

F. GARFIED KAME WASHINGTON & IDON CO

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - May 1, 2000

=======================================	=========	========	========	===========				
		<<======	Drier ====	== Future Co	onditions =	===== Wetter	====>>	
Forecast Point	Forecast	222222		= Chance Of E	xceeding *	=========	======	
	Period	90% (1000AF)	70% (1000AF)	50% (Most		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lake Powell inflow	APR-JUL	3359	4515	5300	69	/005	72/4	=======================================
						6085	7241	7735
Virgin River nr Virgin	APR-JUL	19.8	31	35	53	40	59	66
Virgin River nr Hurricane	APR-JUL	20	23	33	46	43	69	72
Santa Clara River nr Pine Valley	APR-JUL	0.80	2.37	2.90	55	3.48	5.04	5.30
Coal Creek nr Cedar City	APR-JUL	2.8	9.3	10.7	57	12.3	18.6	18.8
		=======	========		========		=========	==========

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Reservoir Storage (1000 AF) - End of April E. GARFIELD, KANE, WASHINGTON, & IRON Co. Watershed Snowpack Analysis - May 1, 2000

Reservoir	Usable Capacity	This	able Stora Last		Watershed	Number of	=======	r as % of
		Year	Year	Avg	·	Data Sites	Last Yr	Average
=======================================		======	========	======		=======	========	=======
GUNLOCK	10.4	10.3	8.2		VIRGIN RIVER	5	63	40
LAKE POWELL	24322.0	20674.0	20889.0	<b></b> -	PAROWAN	2	35	33
QUAIL CREEK	40.0	40.0	40.0		ENTERPRISE TO NEW HARMO	NY 2	0	0
UPPER ENTERPRISE	10.0	5.0	8.0		COAL CREEK	2	53	35
LOWER ENTERPRISE	2.6	0.9	0.8		ESCALANTE RIVER	2	3	4
					E. GARFIELD, KANE, WASH	IN 9	41	32

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

SNOW COURSE DATA FOR THE STATE OF UTAH As of May 2000

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE 1961-90	SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE 1961-90
AGUA CANYON SNOTEL	8900	5/01	ı	0.0	0.0	1.8	DRY FORK SNOTEL	7160	5/01	1	0.0	5.5	e, 6
ALTA CENTRAL	8800	5/01	54	24.4	33.5	33.6	EAST WILLOW CREEK SN	8250	5/01	•	0.0	0.0	0
BEAVER DAMS SNOTEL	8000	5/01	ı	0.0	0.0	بر بر	FARMINGTON CN SNOTEL	8000	5/01	ı	27.5	32.9	19.9
BEAVER DIVIDE SNOTL	8280	5/01	ı	0.0	6.0	3.4	FARMINGTON CANYON I.	6950	4/27	36	14.9	23.5	21.9
BEN LOMOND PK SNOTL	8000	5/01	1	23.3	32.5	33.9	FARNSWORTH LK SNOTEL	0096	5/01	ı	12.0	21.1	21.0
BEN LOMOND TR SNOTL	0009	5/01	ı	0.0	3	6.4	FISH LAKE	8700	4/26	00	0.0	0.0	5.2
BEVAN'S CABIN	6450	4/26	00	0.0	1.0	4.6	FIVE POINTS LAKE SNO 1	10920	5/01	1	14.0	22.6	17.8
BIG FLAT SNOTEL	10290	5/01	t	14.1	17.8	20.2	FRANCES FLATS	00/9				8.3	0.7
BIRCH CROSSING	8100	4/24	0	0.0	0.0	1.9	G.B.R.C. HEADQUARTER	8700	4/26	13	5.7	10.3	15.4
BLACK FLAT-U.M. CK S	9400	5/01	1	0.0	2.6	9.9	G.B.R.C. MEADOWS 1	10000	4/26	47	22.1	22.1	26.1
BLACK'S FORK GS-EF	9340	4/27	12	5.2	7.2	9.2	GARDEN CITY SUMMIT	7600	4/27	16	6.3	17.9	15.9
BLACK'S FORK JUNCIN	8930	4/27	ល	1.7	0.8	7.4		8840				1	1
BOX CREEK SNOTEL	9800	5/01	ı	0.0	8.6	8.8	GOOSEBERRY R.S.	8400	4/26	7	9.0	6.2	9.1
BRIAN HEAD	10000	4/26	30	12.9	14.5	21.6	H	7900	5/01	•	0.0	0.0	1.0
BRIGHTON SNOTEL	8750	5/01	1	6.4	23.6	16.9	HARDSCRABBLE SNOTEL	7250	5/01	1	0.0	5.3	10.6
BRIGHTON CABIN	8700	5/01	29	12.8	26.6	24.8	_	7700	5/01	ı	0.0	0.0	1.9
BROWN DUCK SNOTEL	10600	5/01	ı	13.5	26.7	20.3	HAYDEN FORK SNOTEL	9100	5/01	1	4.3	13.8	9.9
BRYCE CANYON	8000				1	8.0	HENRY'S FORK 1	10000	4/27	21	8.1	11.6	13.6
BUCK FLAT SNOTEL	9800	5/01	ı	5.5	13.9	13.9	HEWINTA SNOTEL	9500	5/01	ı	1.4	13.1	5.3
BUCK PASTURE	9100	4/27	39	15.4	14.9	17.1	SNOTE	9100	5/01	r	0.0	6.1	2.9
BUCKBOARD FLAT	0006	4/26	14	5.4	5.6	7.4		5500	5/01	0	0.0	0.0	0.4
BUG LAKE SNOTEL	7950	5/01	ı	7.4	25.2	16.0		7420	4/26	00	0.0	2.3	7.3
BURT'S-MILLER RANCH	7900	4/27	00	0.0	0.0	2.0		9150	5/01	ı	0.0	8	2.3
CAMP JACKSON SNOTEL	8600	5/01	ı	0.0	1.6	2.0		8260	5/01		5.5	21.8	14.4
CASTLE VALLEY SNOTL	9580	5/01	ı	0.0	9.4	9.9		9800	4/26	43	21.5	20.6	24.9
CHALK CK #1 SNOTEL	9100	5/01	ι	18.2	27.0	22.8	SNOTEL	9100	5/01	I	0.0	4.7	9.9
CHALK CK #2 SNOTEL	8200	5/01	1	5.0	14.6	8.6	×	8850	4/26	00	0.0	0.0	3.8
CHALK CREEK #3	7500	4/27	00	0.0	0.0	2.6		7300	4/27	13	5.4	12.3	6.6
CHEPETA SNOTEL	10300	5/01	ı	4.4	15.9	12.0		6300	5/01	0	0.0	0.0	ı
CITY CREEK	7500	5/01	14	6.9	19.4	18.3	ц	9300	5/01		1.2	12.1	12.1
CLEAR CK RIDG #1 SNT	9200	5/01	ı	5.6	16.4	14.1	KING'S CABIN SNOTEL	8730	5/01	1	1.4	10.2	6.0
CLEAR CK RIDG #2 SNT	8000	4/01	ı	0.0	6.4	5.6	ROWS	7400	4/27	12	5.0	19.4	14.1
CORRAL	8200				1	1		9250	5/01	1	8.5	10.8	16.4
CURRANT CREEK SNOTEL	8000	5/01	1	0.0	0.0	2.6		10100	5/01	ı	5.1	15.3	10.3
DANIELS-STRAWBERRY S	8000	5/01	ı	0.0	4.7	9.7	LAKEFORK BASIN SNOTE 1	10900	5/01	ı	14.4	25.1	25.9
DESERET PEAK (d)	9250				ı	18.2	NTAIN #3	8400	4/27	00	0.0	1.2	1.8
DESERET PEAK AM (d)	9250				į	15.3		7400	5/01	0	0.0	10.5	9.2
DESERRT PEAK SNO (d)	9250				16.7	20.6	LASAL MOUNTAIN LOWER	8800	4/26	0	0.0	0.2	4.6
DILL'S CAMP SNOTEL	9200	5/01	•	0.0	7.3	6,8	NOTE	9850	5/01	ı	0.0	1.4	7.9
DONKEY RESERVOIR SNO	9800	5/01	ı	0.0	6.5	1.9	LILY LAKE SNOTEL	9050	5/01	ı	1.1	13.4	8.7
DRY BREAD POND SNOTL	8350	5/01	ı	4.0	16.2	18.0	LITTLE BEAR LOWER	0009	4/27	8	0.0	0.0	1.6

DATE SNOW WATER LAST AVERAGE DEPTH CONTENT YEAR 1961-90	5/01 - 19.2 25.2 24.0	- 4.4 11.1	1.3	1.0	1	1.0	- 0.0 3.8	0.0 0.0 0.0	- 0.4 9.2	4 1.6 4.1	2.2																																				
ELEV.		9400	8900		7670	9200				0006	8700																																				
SNOW COURSE	TRIAL LAKE SNOTEL	TROUT CREEK SNOTEL	UPPER JOES VALLEY	VERNON CREEK SNOTEL .	VIPONT	WEBSTER FLAT SNOTEL	SNOTE		WIDTSOE #3 SNOTEL	WRIGLEY CREEK	YANKEE RESERVOIR																																				
AVERAGE 1961-90	2.4	٥.	2.0	0.	10.0	0.0	ı	12.4	6.7	8.5	20.0	18.8	13.2	13.4	13.1	26.2	10.4	25.2	2.0	) <del>-</del>	. c	2 E	<u> </u>	11.6	14.0	13.0	12.2	16.5	» -	21.0	15.1	26.8	6.1	30.0	15.3	1.0	L0.5	, t	1	11.0	0.00	2: -	t	1 4	70.0 10.0	. o. c	ا الله الرام المارية
LAST	0.1	0.0	0.0	0.0	24.8	0.0	1	15.8	6.9	3.5	15.7	20.7	24.3	12.4	13.6	35.8	17.9	19.8	. o	0.0	. u	7.7	! .	7.3	14.1	17.9	10.3	15.6	4, c	21.4	15.1	27.9	9.4	43.1	15.5	# F	- C	היע		9 5	1 2 2 2		1		77.7 70.7	- c	m .c
WATER	0.0	0.0	0.0	0.0	14.8	0.0	0.0	9.9	0.0	0.0	8.8	8.9	12.7		4.6	12.3	4.7	16.7	u o	0.0		10	14.2	0.0	0.4	6.2	9.4	o. 0	) ) )	15.5	6.8	18.7	0.0	34.2	11.5		T. 0	5 t	7.0	2.0				•	4 6	23.3	0.6
SNOW	1	;	1	ı	ı	00	ı	ŧ	ı	00	ı	21			1	i	1	37	15	ກຸ	۰ د	٠,	,	1	ı	ı	1 .	16	3 1	1	1	33	t	1	25	3		3 :	, (	٠ ب	?	I			ı		00 5
DATE	5/01	5/01	5/01	5/01	5/01	4/27	5/01	5/01	5/01	4/26	5/01	5/01	5/01		5/01	5/01	5/01	4/26	4/26	4/20	4/20	10/c 12/01	5/01	5/01	5/01	5/01	5/01	4/27	4/26	5/01	5/01	5/01	5/01	5/01	4/27	4/26	10/6	4/2/	10/6	57/5°	17/1	70/0			5/01	10/5	4/27
ELEV.	6550	6100	8000	7500	8200	6130	6700	8800	8750	7000	0086	6950	8960	7400	8000	8960	9500	9500	8600	09//	9200	7500	7740	8050	0096	8800	9200	8500	7300	8900	10000	8730	7600	9700	10300	9300	00101	8220	6400	0078		9200	8200	9100	8140	8400	6250
SNOW COURSE	LITTLE BEAR SNOTEL	LITTLE GRASSY SNOTEL	LONG FLAT SNOTEL	LONG VALLEY JCT. SNT	LOOKOUT PEAK SNOTEL	LOST CREEK RESERVOIR	LOUIS MEADOW SNOTEL	MAMMOTH-COTTONWD SNT	MERCHANT VALLEY SNOT	MIDDLE CANYON	MIDWAY VALLEY SNOTEL	MILL CREEK	MILL-D NORTH SNOTEL	MILL-D SOUTH FORK	MINING FORK SNOTEL	MONTE CRISTO SNOTEL	MOSBY MIN. SNOTEL	MT.BALDY R.S.	MUD CREEK #2	CREEK	PANGULTCH LANE K.S.	DARLET'S CANION SOM.	PARRISH CREEK SNOTEL	PAYSON R.S. SNOTEL	PICKLE KEG SNOTEL	PINE CREEK SNOTEL	RED PINE RIDGE SNOTE	REDDEN MINE LOWER	REES'S FLAT	ROCKY BN-SETTLEMT SN		SILVER LAKE (BRIGHT.)	SMITH MOREHOUSE SNTL	OTEL			N SNO	STILLWATER CAMP	EKKI DIVIDE SN	SUSC KANCH	Ches.	THAINES CANION SHOLD	THISTLE FLAT	TIMBERLINE		TONY GROVE LK SNOTEL	TONY GROVE R.S.

UTAH SURFACE			INDEY
Snow Surveys	NRCS	USDA	
Basin or Region	SWSI/%	Percentile	Years with
			Similar SWSI
Bear River	6	43%	79,99,70,68
Ogden River	-2.5	20%	90,81,96,94
Weber River	-1.0	38%	79,76,70,68
Tooele Valley	NA		
Provo	0.8	59%	72,76,87,70
North Slope	NA		
West Uintah Basin	2.6	81%	87,86,98,97
East Uintah Basin	-1.4	33%	88,90,81,91
Price River	-1.4	33%	64,72,87,88
San Rafael	-1.2	35%	81,91,88,87
Moab	-0.9	39%	82,94,97,92
Upper Sevier River	-0.3	47%	65,74,75,62
Lower Sevier River	1.6	69%	79,87,82,88
Beaver River	-1.4	33%	91,62,65,94
Virgin River	1.0	63%	94,92,88,97
Snow Surveys			SWSI Scale: -4 to 4
245 N Jimmy Doolittle Rd			Percentile: 0 - 100%
Salt Lake City, UT			
(801) 524-5213			

•

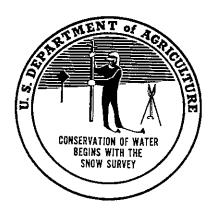
		·		
			•	
	÷			

Issued by

Pearlie S. Reed Chief Natural Resources Conservation Service U.S. Department of Agriculture Released by

Phillip J. Nelson State Conservationist Natural Resources Conservation Service Salt Lake City, Utah

YOU MAY OBTAIN THIS PRODUCT BY VISITING OUR WEB SITE @: http://utsnow.nrcs.usda.gov



245 North Jimmy Doolittle Road Salt Lake City, UT 84116



# Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT

